

**From:** dunlap.david@epa.gov [dunlap.david@epa.gov]  
**Sent:** 6/17/2019 7:13:09 PM  
**To:** Brazauskas, Joseph [brazauskas.joseph@epa.gov]; Voyles, Travis [Voyles.Travis@epa.gov]  
**CC:** Fitzmorris, Amanda [fitzmorris.amanda@epa.gov]  
**Subject:** Fwd: Congressman Tonko at Scientific Integrity Meeting  
**Attachments:** Copy of 6.17\_Stakeholder\_RSVP\_List ONLY IN PERSON RSVPs.xlsx; ATT00001.htm; Draft Agenda Stakeholder Meeting 2019.edited.docx; ATT00002.htm

**Ex. 5 Deliberative Process (DP)**

Sent from my iPhone

Begin forwarded message:

**From:** "Grantham, Nancy" <Grantham.Nancy@epa.gov>  
**Date:** June 17, 2019 at 3:06:24 PM EDT  
**To:** "Orme-Zavaleta, Jennifer" <Orme-Zavaleta.Jennifer@epa.gov>, "Dunlap, David" <dunlap.david@epa.gov>  
**Subject:** FW: Congressman Tonko at Scientific Integrity Meeting

Making sure you have this thanks ng

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**From:** Sauerhage, Maggie  
**Sent:** Monday, June 17, 2019 1:18 PM  
**To:** Richardson, RobinH <Richardson.RobinH@epa.gov>; Grantham, Nancy <Grantham.Nancy@epa.gov>; Linkins, Samantha <Linkins.Samantha@epa.gov>  
**Cc:** Fitzpatrick, Kacey <Fitzpatrick.Kacey@epa.gov>  
**Subject:** Congressman Tonko at Scientific Integrity Meeting

Hi Robin, Nancy and Sam,

Attached is the list of RSVPs for Thursday's Scientific Integrity Stakeholder meeting. Congressman Paul Tonko has RSVP'ed, along with two of his staffers. Additionally, a staffer for House Science has also RSVP'ed.

Robin – can you please work with your team and Sam to work out the logistics for the Congressman's arrival? Additionally, can we find out if he is just planning to attend or would like to speak? I've included the draft agenda here, there is a question and answer time at 2:50pm which is when people have a chance to speak so I imagine that would be the most appropriate time for him to speak but I don't know how this normally works. Please let me know how I can help.

Thanks,  
Maggie

Maggie Sauerhage  
Office of Public Affairs  
U.S. Environmental Protection Agency  
Office: (202) 564-0443  
Cell: **Ex. 6 Personal Privacy (PP)**

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**From:** Otto, Martha

**Sent:** Monday, June 17, 2019 12:53 PM

**To:** Sauerhage, Maggie <[Sauerhage.Maggie@epa.gov](mailto:Sauerhage.Maggie@epa.gov)>

**Cc:** Grifo, Francesca <[Grifo.Francesca@epa.gov](mailto:Grifo.Francesca@epa.gov)>; Neumann, Blake <[neumann.blake@epa.gov](mailto:neumann.blake@epa.gov)>;

Cogliano, Vincent <[cogliano.vincent@epa.gov](mailto:cogliano.vincent@epa.gov)>

**Subject:** 6.17\_Stakeholder\_RSVP\_List ONLY IN PERSON RSVPs.xlsx

Hi, Maggie,

As of noon today, attached is the list of people who have RSVPed and indicated that they were attending in person or it was ambiguous whether it would be by phone or in person.

Please let me know if you need anything else for the security folks.

Thanks,  
Marti

Martha Otto  
Office of the Science Advisor  
mail code 8105R  
tel: 202.564.2782  
[otto.martha@epa.gov](mailto:otto.martha@epa.gov)

Organization	Contact	Title	Email	RSVP	Date Invite Sent	Year Attended Previously	Notes	ID#
American Association for the Advancement of Science (AAAS)	Kei Koizumi	Visting Scholar	<a href="mailto:kkoizumi@aaas.org">kkoizumi@aaas.org</a>	YES	13-Jun	-	in-person	
Bipartisan Policy Center	Daniel D'Arcy	Executive Director	<a href="mailto:ddarcy@bipartisanpolicy.org">ddarcy@bipartisanpolicy.org</a>	YES	13-Jun	-	in-person	
Carlin Economics and Science	Alan Carlin	Executive Director	Ex. 6 Personal Privacy (PP)	YES	13-Jun	-	in-person	
Competitive Enterprise Institute	Myron Ebell	Director	<a href="mailto:mebell@cei.org">mebell@cei.org</a>	YES	13-Jun	-	in-person	
Competitive Enterprise Institute	Marlo Lewis	Senior Fellow	<a href="mailto:marlo.lewis@cei.org">marlo.lewis@cei.org</a>	YES	13-Jun	-	in-person	
Conrad Law and Policy Counsell	Jamie Conrad	Founder	<a href="mailto:jamie@conradcounsel.com">jamie@conradcounsel.com</a>	YES	13-Jun	2015	in-person	
Council of Producers and Distributors of Agrotechnology	Gary Halvorson	President	<a href="mailto:ghalvorson@cpda.com">ghalvorson@cpda.com</a>	YES	13-Jun	2015	in-person	
Endocrine Society	Joseph Laakso	Director, Science Policy	<a href="mailto:jlaakso@endocrine.org">jlaakso@endocrine.org</a>	YES	13-Jun	-	in-person	
Environmental Defense Fund	Lindsay McCormick	Program Manager	<a href="mailto:lmccormick@edf.org">lmccormick@edf.org</a>	YES	13-Jun	-	in-person	
George Washington University Jacobs Institute for Women's Health	Liz Borkowski	Managing Editor, <i>Women's Health Issues</i>	<a href="mailto:borkowsk@gwu.edu">borkowsk@gwu.edu</a>	YES	13-Jun	-	in-person	
House Committee on Science, Space & Technology	Janie Wise Thompson	Subcommittee Staff Director	<a href="mailto:janie.thompson@mail.house.gov">janie.thompson@mail.house.gov</a>	YES	13-Jun	-	in-person	
Monsanto	James Nyangulu	U.S. Agencies, Reg. Affairs Manager	<a href="mailto:james.m.nyangulu@monsanto.com">james.m.nyangulu@monsanto.com</a>	YES	13-Jun	2015	in-person	
Naphthalene Council, Inc.	Anne LeHuray	Executive Director	<a href="mailto:alehuray@pavementcouncil.org">alehuray@pavementcouncil.org</a>	YES	13-Jun	2015	in-person	
Project on Government Oversight	Sean Moulton	Senior Policy Analyst	<a href="mailto:smoulton@pogo.org">smoulton@pogo.org</a>	YES	13-Jun	-	in-person	
Regulatory Checkbook, Neutral Science	Richard Belzer	Principal Consultant	<a href="mailto:rbbelzer@post.harvard.edu">rbbelzer@post.harvard.edu</a>	YES	13-Jun	-	in-person	



The Heartland Institute	Aaron Stover	Corporate Relations Officer	<a href="mailto:astover@heartland.org">astover@heartland.org</a>	YES	13-Jun	-	in-person
Union of Concerned Scientists	Pamitha D. Weerasinghe	Representative, Center for Science and Democracy	<a href="mailto:Pweerasinghe@ucsusa.org">Pweerasinghe@ucsusa.org</a>	YES	13-Jun	-	in-person
University of Hartford	Laurence Gould	Professor	<a href="mailto:lgould@hartford.edu">lgould@hartford.edu</a>	YES	13-Jun	-	in-person
United States Energy Association	Ryan LaCoe	Staff	<a href="mailto:rlacoe@usea.org">rlacoe@usea.org</a>	YES	13-Jun	-	in-person
American Association for the Advancement of Science (AAAS)	Joanne Padron Carney	Chief Government Relations Officer	<a href="mailto:jcarney@aaas.org">jcarney@aaas.org</a>	YES	13-Jun	-	in-person
American Chemical Society	Brandi Neifert	Public Policy Associate, External Affairs & Communications, Office of the Sec and Gen Counsel	<a href="mailto:b_neifert@acs.org">b_neifert@acs.org</a>	YES	13-Jun	-	(forwarded invite) in-person
American Chemical Society	Ray Garant		<a href="mailto:R_Garant@acs.org">R_Garant@acs.org</a>	YES	?		in-person

Joanne Padrón Carney  
Chief Government Relations  
Officer  
American Association for the  
Advancement of Science  
1200 New York Avenue, NW  
20005  
Telephone: Ex. 6 Personal Privacy (PP)  
Email: jcarney@aaas.org  
Brandi Neifert  
Public Policy Associate |  
External Affairs &  
Communications  
Office of the Secretary and  
General Counsel  
American Chemical Society  
1155 16th St., NW |  
Washington | DC 20036  
T Ex. 6 Personal Privacy (PP)  
www.acs.org  
no additional contact info

American Gas Association	Timothy Parr	Senior Counsel	<a href="mailto:tparr@aga.org">tparr@aga.org</a>	YES	in-person
American Geophysical Union	Caitlin Bergstrom	Public Affairs Analyst	<a href="mailto:cbergstrom@agu.org">cbergstrom@agu.org</a>	YES	in-person
American Petroleum Institute	Jessica Ryman-Rasmussen	Science Advisor, Regulatory and Scientific Affairs	<a href="mailto:rymanj@api.org">rymanj@api.org</a>	YES	in-person
Government Accountability Project	Mackenzie Battle	Summer Associate	<a href="mailto:Environmentalintern1@whistleblower.org">Environmentalintern1@whistleblower.org</a>	YES	in-person
Government Accountability Project	Will Halnon	Summer Associate	<a href="mailto:Environmentalintern@whistleblower.org">Environmentalintern@whistleblower.org</a>	YES	in-person

Timothy Parr | Senior Counsel  
tparr@aga.org  
American Gas Association  
400 N. Capitol St., NW |  
Washington, DC | 20001

Ex. 6 Personal Privacy (PP)

tparr@aga.org  
Caitlin Bergstrom  
Public Affairs Analyst

Ex. 6 Personal Privacy (PP)

cbergstrom@agu.org  
www.agu.org  
#AGU100  
2000 Florida Ave., NW |  
Washington, DC 20009

Jessica Ryman- Rasmussen,  
PhD, DABT  
Science Advisor  
Regulatory and Scientific  
Affairs  
API  
200 Massachusetts Ave., NW  
Washington DC 20001

Phone: Ex. 6 Personal Privacy (PP)  
Fax:  
www.api.org

no additional contact info

no additional contact info



Health Effects Institute	Daniel Greenbaum	President	<a href="mailto:dgreenbaum@healtheffects.org">dgreenbaum@healtheffects.org</a>	YES	13-Jun	-	They are identifying who will participate - via audio? He didn't say.
Junkscience.com	Steve Milloy	Editor	Ex. 6 Personal Privacy (PP)	YES	13-Jun	-	in person or by audio
Union of Concerned Scientists	Michael Halpern	Deputy Director of the Center for Science and Integrity	<a href="mailto:mhalpern@ucsusa.org">mhalpern@ucsusa.org</a>	YES	13-Jun	-	in-person
Union of Concerned Scientists	Jacob Carter	Research Scientist, Center for Science and Democracy	<a href="mailto:jcarter@ucsusa.org">jcarter@ucsusa.org</a>	YES	13-Jun	-	in-person
Committee on Science, Space, and Technology	Sara Palasits	Professional Staff, Oversight Committee, Committee on Sci, Space, & Tech	<a href="mailto:Sara.Palasits@mail.house.gov">Sara.Palasits@mail.house.gov</a>	YES	?		in-person

Dan Greenbaum, President  
Health Effects Institute  
75 Federal Street Suite 1400  
Boston, MA 02110  
O: +1 [Redacted]  
C: +1 [Redacted]  
www.healtheffects.org

no additional contact info

Jacob Carter, Ph.D.  
Research Scientist, Center for  
Science and Democracy  
Union of Concerned Scientists  
| 1825 K Street NW, Suite 800  
| Washington, DC 20006  
P: [Redacted] | E:  
JCarter@ucsusa.org

Sara Palasits  
Professional Staff, Oversight  
Subcommittee  
Committee on Science, Space,  
and Technology  
U.S. House of Representatives  
202-225-7567  
Sara.Palasits@mail.house.gov

Energy and Commerce Committee	Mel Peffers	Brookings LEGIS Fellow	<a href="mailto:mel.peffers@mail.house.gov">mel.peffers@mail.house.gov</a>	YES	17-Jun	in-person
U.S. House of Representatives	Congressman Paul Tonko	U.S. Congressman		YES		in-person
U.S. House of Representatives	Emily Silverberg	Senior Legislative Assistant to Rep. Tonko	<a href="mailto:emily.silverberg@mail.house.gov">emily.silverberg@mail.house.gov</a>	YES		in-person
	Kira Vuille-Kowing	Senior Legislative Assistant to Rep. Tonko	<a href="mailto:Kira.Vuille-Kowing@mail.house.gov">Kira.Vuille-Kowing@mail.house.gov</a>	YES		in-person

Mel Peffers  
Brookings LEGIS Fellow  
Energy and Commerce  
Committee  
mel.peffers@mail.house.gov  
202-225-5630  
Use Emily Silverberg's contact  
info for Tonko, Silverberg, and  
Vuille-Kowing  
Emily Duhovny Silverberg  
Senior Legislative Assistant  
Congressman Paul D. Tonko  
(NY-20)  
Emily.Silverberg@mail.house.  
gov  
2369 Rayburn HOB,  
Washington, DC 20515  
t: 202.225.5076 | f: 202.225-  
5077  
See Emily Silverberg's contact  
information. Emily RSVPed for  
Tonko, Silverberg, Vuille-  
Kowing.

Message

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**From:** Hubbard, Carolyn [Hubbard.Carolyn@epa.gov]  
**Sent:** 6/3/2019 1:59:36 PM  
**To:** Dunlap, David [dunlap.david@epa.gov]; Blackburn, Elizabeth [Blackburn.Elizabeth@epa.gov]; Rodan, Bruce [rodan.bruce@epa.gov]; Orme-Zavaleta, Jennifer [Orme-Zavaleta.Jennifer@epa.gov]  
**Subject:** FW: Scientific Integrity INVITE AND UPDATED LIST  
**Attachments:** Copy of Master Stakeholder List MAY 2019 FTGEdits alpha by org.xlsx; 2019 Stakeholder mtg invitation 29 May 2019.docx

Carolyn Hubbard  
Communications Director  
EPA Office of Research and Development  
202-564-2189

Ex. 6 Personal Privacy (PP)

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**From:** Grifo, Francesca  
**Sent:** Wednesday, May 29, 2019 2:35 PM  
**To:** Grantham, Nancy <Grantham.Nancy@epa.gov>; Otto, Martha <Otto.Martha@epa.gov>; Sauerhage, Maggie <Sauerhage.Maggie@epa.gov>  
**Cc:** Gibbons, Dayna <Gibbons.Dayna@epa.gov>; Hubbard, Carolyn <Hubbard.Carolyn@epa.gov>; Cogliano, Vincent <cogliano.vincent@epa.gov>; Fitzpatrick, Kacey <Fitzpatrick.Kacey@epa.gov>  
**Subject:** INVITE AND UPDATED LIST

Hi all – Sorry for the delay! Here is the final list of invitees and final invitation. There are still blanks. If no one has names for these suggested organizations, we can either send the 286 invites and wait for the last 65 or wait for that last 65 before sending or drop the 65.

Nancy – if you all would rather send this out – we are ok with that. Our plan is that as soon as you all approve, we would send these names bcc in an email out to this list with the invite in the body.

Thanks and let me know if you have questions or concerns.  
Best,  
Francesca

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**From:** Grantham, Nancy  
**Sent:** Wednesday, May 29, 2019 12:53 PM  
**To:** Scott-Forte, Londa <Scott-Forte.Londa@epa.gov>; Otto, Martha <Otto.Martha@epa.gov>; Sauerhage, Maggie <Sauerhage.Maggie@epa.gov>; Grifo, Francesca <Grifo.Francesca@epa.gov>  
**Cc:** Ryan, Jini <Ryan.Jini@epa.gov>; Gibbons, Dayna <Gibbons.Dayna@epa.gov>; Hubbard, Carolyn <Hubbard.Carolyn@epa.gov>; Cogliano, Vincent <cogliano.vincent@epa.gov>; Fitzpatrick, Kacey <Fitzpatrick.Kacey@epa.gov>  
**Subject:** RE: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official

Good to go thanks

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**From:** Scott-Forte, Londa  
**Sent:** Wednesday, May 29, 2019 12:37 PM  
**To:** Otto, Martha <Otto.Martha@epa.gov>; Sauerhage, Maggie <Sauerhage.Maggie@epa.gov>; Grifo, Francesca

<Grifo.Francesca@epa.gov>

Cc: Ryan, Jini <Ryan.Jini@epa.gov>; Gibbons, Dayna <Gibbons.Dayna@epa.gov>; Hubbard, Carolyn <Hubbard.Carolyn@epa.gov>; Grantham, Nancy <Grantham.Nancy@epa.gov>; Cogliano, Vincent <cogliano.vincent@epa.gov>; Fitzpatrick, Kacey <Fitzpatrick.Kacey@epa.gov>

**Subject:** Re: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official

Attached is the revised banner and elevator sign with the requested edits.

Thanks!

Londa

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**LONDA SCOTT FORTE**

Visual Information Specialist

U.S. EPA

Office of Multimedia

Office of Public Affairs

6318 William Jefferson Clinton Building North (WJC Bldg North)

Washington, DC 20460

202.564.1504 (office phone)

[intranet.epa.gov/media](http://intranet.epa.gov/media)

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**From:** Otto, Martha

**Sent:** Wednesday, May 29, 2019 12:27:12 PM

**To:** Scott-Forte, Londa; Sauerhage, Maggie; Grifo, Francesca

**Cc:** Ryan, Jini; Gibbons, Dayna; Hubbard, Carolyn; Grantham, Nancy; Cogliano, Vincent; Fitzpatrick, Kacey

**Subject:** RE: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official

Hi, Londa,

Thank you, again, for your help with these!

Please make the following edits:

1. For the elevator sign, right now, the URL for more information is listed twice. Please delete the first instance of the URL. Then, reword the next phrase to say "To participate via Adobe Connect or by telephone, please visit: <https://intranet.ord.epa.gov/scientific-integrity/annual-conversation>" You can then center the phrase in the space it's occupying.

2. For the banner, please use the same phrase -- "To participate via Adobe Connect or by telephone, please visit: <https://intranet.ord.epa.gov/scientific-integrity/annual-conversation>"

Please let me know if you have any questions.

We appreciate your help.

Martha

Martha Otto  
Office of the Science Advisor  
mail code 8105R  
tel: 202.564.2782  
[otto.martha@epa.gov](mailto:otto.martha@epa.gov)

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**From:** Scott-Forte, Londa  
**Sent:** Wednesday, May 29, 2019 7:51 AM  
**To:** Sauerhage, Maggie <[Sauerhage.Maggie@epa.gov](mailto:Sauerhage.Maggie@epa.gov)>  
**Cc:** Ryan, Jini <[Ryan.Jini@epa.gov](mailto:Ryan.Jini@epa.gov)>; Gibbons, Dayna <[Gibbons.Dayna@epa.gov](mailto:Gibbons.Dayna@epa.gov)>; Otto, Martha <[Otto.Martha@epa.gov](mailto:Otto.Martha@epa.gov)>; Hubbard, Carolyn <[Hubbard.Carolyn@epa.gov](mailto:Hubbard.Carolyn@epa.gov)>  
**Subject:** Re: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official

Attached is the updated elevator sign and web graphic using the Adobe Connect url.

Thanks!

Londa

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**LONDA SCOTT FORTE**  
Visual Information Specialist

U.S. EPA  
Office of Multimedia  
Office of Public Affairs  
6318 William Jefferson Clinton Building North (WJC Bldg North)  
Washington, DC 20460  
202.564.1504 (office phone)

[intranet.epa.gov/media](https://intranet.epa.gov/media)

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**From:** Sauerhage, Maggie  
**Sent:** Tuesday, May 28, 2019 3:09:48 PM

**To:** Scott-Forte, Londa

**Cc:** Ryan, Jini; Gibbons, Dayna; Otto, Martha; Hubbard, Carolyn

**Subject:** RE: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official

Hi Londa – sorry, can we add update the tombstones + the banner for This Week@EPA to both say this before the link that's already included in both:

**To participate remotely via Adobe Connect, please visit:** <https://intranet.ord.epa.gov/scientific-integrity/annual-conversation>

Maggie Sauerhage  
Office of Public Affairs  
U.S. Environmental Protection Agency  
Office: (202) 564-0443  
Cell: Ex. 6 Personal Privacy (PP)

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**From:** Scott-Forte, Londa

**Sent:** Tuesday, May 28, 2019 1:26 PM

**To:** Ryan, Jini <[Ryan.Jini@epa.gov](mailto:Ryan.Jini@epa.gov)>; Otto, Martha <[Otto.Martha@epa.gov](mailto:Otto.Martha@epa.gov)>

**Cc:** Sauerhage, Maggie <[Sauerhage.Maggie@epa.gov](mailto:Sauerhage.Maggie@epa.gov)>; Hubbard, Carolyn <[Hubbard.Carolyn@epa.gov](mailto:Hubbard.Carolyn@epa.gov)>; Grifo, Francesca <[Grifo.Francesca@epa.gov](mailto:Grifo.Francesca@epa.gov)>; Fitzpatrick, Kacey <[Fitzpatrick.Kacey@epa.gov](mailto:Fitzpatrick.Kacey@epa.gov)>; Cogliano, Vincent <[cogliano.vincent@epa.gov](mailto:cogliano.vincent@epa.gov)>; Grantham, Nancy <[Grantham.Nancy@epa.gov](mailto:Grantham.Nancy@epa.gov)>

**Subject:** Re: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official

Hi All,

Attached is the updated version of the Scientific Integrity elevator poster. Like Jini said, if you can add the InDesign file to OneDrive, then I can make the edit to the banner today.

Thanks!

londa

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**LONDA SCOTT FORTE**  
Visual Information Specialist

U.S. EPA  
Office of Multimedia



Office of Public Affairs  
6318 William Jefferson Clinton Building North (WJC Bldg North)  
Washington, DC 20460  
202.564.1504 (office phone)

[intranet.epa.gov/media](http://intranet.epa.gov/media)

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**From:** Ryan, Jini  
**Sent:** Tuesday, May 28, 2019 12:52:28 PM  
**To:** Otto, Martha  
**Cc:** Scott-Forte, Londa; Sauerhage, Maggie; Hubbard, Carolyn; Grifo, Francesca; Fitzpatrick, Kacey; Cogliano, Vincent; Grantham, Nancy  
**Subject:** Re: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official

Can you please send the In Design file to us through OneDrive? Thanks.

Jini Ryan  
Office of Multimedia  
Director/Executive Video Producer  
202-564-0175 (work)  

Ex. 6 Personal Privacy (PP)

 (cell)

Sent from my iPhone

> On May 28, 2019, at 12:37 PM, Otto, Martha <[Otto.Martha@epa.gov](mailto:Otto.Martha@epa.gov)> wrote:  
>  
> Hi, Londa,  
>  
> Thank you, again, for drafting the update of the poster for the Annual Employee Conversation with the Scientific Integrity Official. My only comment on it is to request that you remove the line:  
>  
> [epawebconferencing.acms.com/scientific-integrity](http://epawebconferencing.acms.com/scientific-integrity)  
>  
> You can then even out the spacing where it was.  
>  
> Regarding the banner: could you please update the banner, as well? I have attached a jpg file. I have an InDesign file, but it's too large to send via email. How can I get that to you? When you update the banner, it should have the same room, date, time, website as the poster.  
>  
> Thank you for your help with this. Please let me know if you have any questions...and how I can get the banner file to you.  
>  
> Martha  
>  
> Martha Otto  
> Office of the Science Advisor  
> mail code 8105R  
> tel: 202.564.2782  
> [otto.martha@epa.gov](mailto:otto.martha@epa.gov)<<mailto:otto.martha@epa.gov>>

>

> From: Scott-Forte, Londa

> Sent: Tuesday, May 21, 2019 9:49 AM

> To: Ryan, Jini <[Ryan.Jini@epa.gov](mailto:Ryan.Jini@epa.gov)>; Sauerhage, Maggie <[Sauerhage.Maggie@epa.gov](mailto:Sauerhage.Maggie@epa.gov)>

> Cc: Otto, Martha <[Otto.Martha@epa.gov](mailto:Otto.Martha@epa.gov)>; Hubbard, Carolyn <[Hubbard.Carolyn@epa.gov](mailto:Hubbard.Carolyn@epa.gov)>; Grifo, Francesca <[Grifo.Francesca@epa.gov](mailto:Grifo.Francesca@epa.gov)>; Fitzpatrick, Kacey <[Fitzpatrick.Kacey@epa.gov](mailto:Fitzpatrick.Kacey@epa.gov)>; Cogliano, Gerain <[Cogliano.Gerain@epa.gov](mailto:Cogliano.Gerain@epa.gov)>; Grantham, Nancy <[Grantham.Nancy@epa.gov](mailto:Grantham.Nancy@epa.gov)>

> Subject: Re: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official

>

>

> Attached is the updated 2018 poster with the new date/time for 2019. The new tombstone size is 20"x55"

>

> Please let me know of any changes/corrections.

>

>

>

> Thanks!

>

> Londa

>

>

>

> \_\_\_\_\_

> LONDA SCOTT FORTE

> Visual Information Specialist

> U.S. EPA

> Office of Multimedia

> Office of Public Affairs

> 6318 William Jefferson Clinton Building North (WJC Bldg North)

> Washington, DC 20460

> 202.564.1504 (office phone)

>

> [intranet.epa.gov/media](http://intranet.epa.gov/media)

>

> \_\_\_\_\_

> From: Ryan, Jini

> Sent: Monday, May 20, 2019 5:06:28 PM

> To: Sauerhage, Maggie

> Cc: Otto, Martha; Scott-Forte, Londa; Hubbard, Carolyn; Grifo, Francesca; Fitzpatrick, Kacey; Cogliano, Gerain; Grantham, Nancy

> Subject: Re: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official

>

> We'll take a look tomorrow. Thanks.

>

>

>

> Jini Ryan

> Office of Multimedia

> Director/Executive Video Producer

> 202-564-0175 (work)

> Ex. 6 Personal Privacy (PP) cell)

>  
> Sent from my iPhone  
>  
>> On May 20, 2019, at 4:36 PM, Sauerhage, Maggie  
<[Sauerhage.Maggie@epa.gov](mailto:Sauerhage.Maggie@epa.gov)<<mailto:Sauerhage.Maggie@epa.gov>>> wrote:  
>>  
>> Thanks Marti – adding Londa and Jini. Londa will be able to update these signs for you.  
>>  
>> Londa – please see Marty’s request below for help in updating these signs for an internal-EPA event on June 6th. Is this something you can help with? Thank you!  
>>  
>> From Marti:  
>> Regarding outreach for the Annual Employee Conversation with the Scientific Integrity Official, we had mentioned that we have last year’s banner and tombstone designs, which were created using InDesign. You offered to update them for us.  
>>  
>> I have attached the InDesign file for the tombstone and a pdf copy of the tombstone. I cannot open the InDesign file. I’m hoping that the pdf matches what’s in the InDesign file. The only information that is changing on the tombstone is that the meeting will be on Thursday, June 6th, from 1 to 3 pm EDT. Same room as last year. I have not yet verified that we are going to use the same Adobe Connect room as last year, but it’s a good guess that we will.  
>>  
>> Unfortunately, the InDesign file for the banner is too big to send via email. How can I get that to you? I did attach a jpg file of the banner, so that you can see what it looks like. We have not yet updated the intranet website that is listed in the banner, but we will use the same website.  
>>  
>> Please let me know if you have any questions – and, also how to get the banner InDesign file to you.  
>>  
>>  
>> Maggie Sauerhage  
>> Office of Public Affairs  
>> U.S. Environmental Protection Agency  
>> Office: (202) 564-0443  
>> Cell: Ex. 6 Personal Privacy (PP)  
>>  
>> From: Otto, Martha  
>> Sent: Monday, May 20, 2019 4:33 PM  
>> To: Sauerhage, Maggie <[Sauerhage.Maggie@epa.gov](mailto:Sauerhage.Maggie@epa.gov)<<mailto:Sauerhage.Maggie@epa.gov>>>  
>> Cc: Hubbard, Carolyn <[Hubbard.Carolyn@epa.gov](mailto:Hubbard.Carolyn@epa.gov)<<mailto:Hubbard.Carolyn@epa.gov>>>; Fitzpatrick, Kacey <[Fitzpatrick.Kacey@epa.gov](mailto:Fitzpatrick.Kacey@epa.gov)<<mailto:Fitzpatrick.Kacey@epa.gov>>>; Grifo, Francesca <[Grifo.Francesca@epa.gov](mailto:Grifo.Francesca@epa.gov)<<mailto:Grifo.Francesca@epa.gov>>>; Cogliano, Vincent <[cogliano.vincent@epa.gov](mailto:cogliano.vincent@epa.gov)<<mailto:cogliano.vincent@epa.gov>>>  
>> Subject: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official  
>>  
>> Hi, Maggie,  
>>  
>> Thank you, again, for meeting with us last week about our upcoming events (the Annual Employee Conversation with the Scientific Integrity Official (on June 6th) and the Annual Scientific Integrity Stakeholder meeting (on June 20th)). We really appreciate your help!  
>>  
>> Regarding outreach for the Annual Employee Conversation with the Scientific Integrity Official, we had mentioned that we have last year’s banner and tombstone designs, which were created using InDesign. You offered to update them for us.

>>  
>> I have attached the InDesign file for the tombstone and a pdf copy of the tombstone. I cannot open the InDesign file. I'm hoping that the pdf matches what's in the InDesign file. The only information that is changing on the tombstone is that the meeting will be on Thursday, June 6th, from 1 to 3 pm EDT. Same room as last year. I have not yet verified that we are going to use the same Adobe Connect room as last year, but it's a good guess that we will.  
>>  
>> Unfortunately, the InDesign file for the banner is too big to send via email. How can I get that to you? I did attach a jpg file of the banner, so that you can see what it looks like. We have not yet updated the intranet website that is listed in the banner, but we will use the same website.  
>>  
>> Please let me know if you have any questions – and, also how to get the banner InDesign file to you.  
>> Thank you for your help!  
>>  
>> Marti  
>>  
>> Martha Otto  
>> Office of the Science Advisor  
>> mail code 8105R  
>> tel: 202.564.2782  
>> otto.martha@epa.gov<<mailto:otto.martha@epa.gov>>  
>>  
>>  
>> <Final 2018 Tombstone.indd>  
>> <Final 2018 Tombstone.pdf>  
>> <Final 2018 Banner 5-16-18.jpg>  
> <Final 2018 Banner 5-16-18.jpg>  
> <2019Science\_Integrity-20x55-1.pdf>

Organization	Contact	Title	Email	RSVP	Date Invite Sent	Year Attended Previously
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American Association for the Advancement of Science (AAAS)	Joanne Padron Carney		<a href="mailto:jcarney@aaas.org">jcarney@aaas.org</a>			
American Association for the Advancement of Science (AAAS)	Kei Koizumi		<a href="mailto:kkoizumi@aaas.org">kkoizumi@aaas.org</a>			
American Association of Petroleum Geologists						
American Beverage Association	Maia Jack		<a href="mailto:Mjack@ameribev.org">Mjack@ameribev.org</a>			2015
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American Chemical Society	Caroline Trupp Gil		<a href="mailto:c_TruppGil@acs.org">c_TruppGil@acs.org</a>			
American Chemical Society Green Chemical Institute						
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American Chemistry Council	Laura Brust		<a href="mailto:laura_brust@americanchemistry.com">laura_brust@americanchemistry.com</a>			2015
American Chemistry Council	David Fischer		<a href="mailto:david_fischer@americanchemistry.com">david_fischer@americanchemistry.com</a>			2015
American Chemistry Council	Kimberly White		<a href="mailto:Kimberly_White@americanchemistry.com">Kimberly_White@americanchemistry.com</a>			2016
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American Chemistry Council	Devon Harman		<a href="mailto:devon_harman@americanchemistry.com">devon_harman@americanchemistry.com</a>			
American Chemistry Council	Brenda Barry					2015

Notes	ID#
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email bounced back	

American Chemistry Council	Has Shah		2015
American Cleaning Institute			
American Composites Manufacturer's Association (ACMA)	John Schweitzer	<a href="mailto:jschweitzer@acmanet.org">jschweitzer@acmanet.org</a>	2015
American Council on Science and Health	Hank Campbell	<a href="mailto:hank@acsh.org">hank@acsh.org</a>	
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info

Retired



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Association of State Drinking water Associations			
Autocare Association			
Basel Action Network			
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Chevron		
Children's Environmental Health Network		
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Climate Physics LLC	Edwin Berry	<a href="mailto:ed@edberry.com">ed@edberry.com</a>



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Dow Corning	Gary Kolesar		2015
Dow Corning	Debra McNett		2015
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Farm Worker Association of Florida			

(forwarded  
invite)

**Ex. 6 Personal Privacy (PP)**

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no  
response



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Florida Department of Health			
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National Association of County and City Health Officials		
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Pesticide Action Network			
Pfizer			
Physicians Committee for Responsible Medicine	Nancy Beck	<a href="mailto:nbeck@pcrm.org">nbeck@pcrm.org</a>	
Physicians for Social Responsibility			

called, but unable to get info

Proctor and Gamble	Sean Broderick	<a href="mailto:Broderick.sp@pg.com">Broderick.sp@pg.com</a>	2015
Proctor and Gamble	Susan Felter	<a href="mailto:felter.sp@pg.com">felter.sp@pg.com</a>	
Proctor and Gamble	Sharon Stuard		2015
Program on Climate and Health (George Mason University)			
Project on Government Oversight	Danielle Brian	<a href="mailto:danielle@pogo.org">danielle@pogo.org</a> / <a href="mailto:dbrian@pogo.org">dbrian@pogo.org</a>	
Project on Government Oversight	Sean Moulton	<a href="mailto:smoulton@pogo.org">smoulton@pogo.org</a>	
Project on Government Oversight	Rebecca "Becca" Jones	<a href="mailto:rjones@pogo.org">rjones@pogo.org</a>	
Project on Government Oversight	Laura Peterson	<a href="mailto:lpeterson@pogo.org">lpeterson@pogo.org</a>	
Public Citizen	Sidney Wolfe	<a href="mailto:swolfe@citizen.org">swolfe@citizen.org</a>	
Public Citizen	Lisa Gilbert	<a href="mailto:lgilbert@citizen.org">lgilbert@citizen.org</a>	
Public Citizen	Susan Harley	<a href="mailto:sharley@citizen.org">sharley@citizen.org</a>	
Public Citizen	Shanna Devine	<a href="mailto:sdevine@citizen.org">sdevine@citizen.org</a>	
Public Employees for Environmental Responsibility	Tim Whitehouse	<a href="mailto:twhitehouse@peer.org">twhitehouse@peer.org</a>	
Public Member ACC SST	Larry Reiter	<a href="mailto:lreiter@uthsc.edu">lreiter@uthsc.edu</a>	2015
Regnet Environmental Services	Robert Fensterheim	<a href="mailto:rfensterheim@regnet.com">rfensterheim@regnet.com</a>	2015
Regnet Environmental Services	Robert Fensterheim	<a href="mailto:haylie.choi@regnet.com">haylie.choi@regnet.com</a>	
Regulatory Checkbook, Neutral Science	Richard Belzer	<a href="mailto:rbbelzer@post.harvard.edu">rbbelzer@post.harvard.edu</a>	

unable to find contact info
unable to find contact info
unable to find contact info
in-person

Reporters Committee for Freedom of the Press	Gregg Leslie	<a href="mailto:gleslie@rcfp.org">gleslie@rcfp.org</a>	
Resources for the Future	Margaret Walls	<a href="mailto:walls@rff.org">walls@rff.org</a>	
Retired DOE	Ronald Sundelin	Ex. 6 Personal Privacy (PP)	
Retired NASA	Hal Doiron		
Retired NASA	Ferenc Miskolczi		
Safer Chemicals Healthy Families			
Schnare Law	David Schnare	Ex. 6 Personal Privacy (PP)	
Science and Environmental Policy Project	Kenneth Haapala	<a href="mailto:ken@sepp.org">ken@sepp.org</a>	
Shell Oil Company	Stuart Cagen	<a href="mailto:stuart.cagen@shell.com">stuart.cagen@shell.com</a>	2015
Sierra Club	Liz Perera	<a href="mailto:liz.perera@sierraclub.org">liz.perera@sierraclub.org</a>	
Silent Spring Institute			
Society for Conservation Biology	Heather DeCaluwe	<a href="mailto:hdecaluwe@conbio.org">hdecaluwe@conbio.org</a>	
Society of Chemical Manufacturers and Affiliates			
Society of Environmental Journalists	Joe Davis	Ex. 6 Personal Privacy (PP)	
		<a href="mailto:jdavis@sej.org">jdavis@sej.org</a>	
Society of Environmental Toxicology and Chemistry			
Society of Professional Journalists	Kathryn Foxhall	Ex. 6 Personal Privacy (PP)	
Society of Professional Journalists	Jennifer Royer	<a href="mailto:jroyer@hq.spi.org">jroyer@hq.spi.org</a>	
Solid Waste Association of North America			
Spark of Freedom Foundation	James Taylor	Ex. 6 Personal Privacy (PP)	
Sumitomo	Yoshi Deguchi		2015



Summit Tox	Lesa Aylward	<a href="mailto:laylward@summittoxicology.com">laylward@summittoxicology.com</a>	2015
Sunlight Foundation	Rachel Bergman	<a href="mailto:rbergman@sunlightfoundation.com">rbergman@sunlightfoundation.com</a>	
Syngenta			
Texas Commission on Environmental Quality	Michael Honeycutt	<a href="mailto:michael.honeycutt@tecq.texas.gov">michael.honeycutt@tecq.texas.gov</a>	
The Dow Chemical Company	Katie Coady	<a href="mailto:kcoady@dow.com">kcoady@dow.com</a>	2015
The Dow Chemical Company	Sue Marty		2015
The Dow Chemical Company	Joanna Klapacz		2015
The Dow Chemical Company	Craig Rowlands		2015
The Heartland Institute	Veronica Harrison	<a href="mailto:vharrison@heartland.org">vharrison@heartland.org</a>	
The Heartland Institute	Jim Lakely	<a href="mailto:jlakely@heartland.org">jlakely@heartland.org</a>	
The Heartland Institute	Joseph Bast	<a href="mailto:jbast@heartland.org">jbast@heartland.org</a>	
The Heartland Institute	Aaron Stover	<a href="mailto:astover@heartland.org">astover@heartland.org</a>	
The Heartland Institute	H. Sterling Burnett	<a href="mailto:hburnett@heartland.org">hburnett@heartland.org</a>	
The Heartland Institute	Norman Rogers	<b>Ex. 6 Personal Privacy (PP)</b>	
The Johns Hopkins University	Martin Stephens	<a href="mailto:msteph14@jhu.edu">msteph14@jhu.edu</a>	2015
The Medical Society Consortium on Climate & Health			
Thermo Fisher Scientific, Inc.			
Toxics Use Reduction Institute			
Trust for America's Health			
Unilever			
Union of Concerned Scientists	Michael Halpern	<a href="mailto:mhalpern@ucsusa.org">mhalpern@ucsusa.org</a>	
Union of Concerned Scientists	Jacob Carter	<a href="mailto:jcarter@ucsusa.org">jcarter@ucsusa.org</a>	
Union of Concerned Scientists	Gretchen Goldman	<a href="mailto:ggoldman@ucsusa.org">ggoldman@ucsusa.org</a>	
<a href="mailto:UAWdsivin@uaw.net">UAWdsivin@uaw.net</a>	Darius Sivin		





University of Hartford	Laurence Gould	<a href="mailto:lgould@hartford.edu">lgould@hartford.edu</a>
University of Missouri	Anthony Lupo	<a href="mailto:lupoa@missouri.edu">lupoa@missouri.edu</a>
US Naval Academy	Mark Campbell	<a href="mailto:campbell@usna.edu">campbell@usna.edu</a>
Virginia Department of Environmental Quality		
Virginia Department of Mines, Minerals, and Energy		
Washington State Department of Ecology		
Water Environment and Reuse Foundation		
Water Environment Federation		
Water Environment Research Foundation		
Water Quality Assn.		
Wisconsin Public Radio	Steve Paulson	<a href="mailto:paulson@wpr.org">paulson@wpr.org</a>
World Resources Institute	Janet Ranganathan	<a href="mailto:janetr@wri.org">janetr@wri.org</a>



Message

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**From:** Orme-Zavaleta, Jennifer [Orme-Zavaleta.Jennifer@epa.gov]  
**Sent:** 6/19/2019 12:11:10 PM  
**To:** Dunlap, David [dunlap.david@epa.gov]  
**CC:** Christian, Megan [Christian.Megan@epa.gov]; Blackburn, Elizabeth [Blackburn.Elizabeth@epa.gov]  
**Subject:** FW: RSVPs for Stakeholder Meeting as of 5 pm on 6/18/2019  
**Attachments:** 6.18\_Stakeholder\_RSVP\_List.xlsx; ATT00001.htm

Sharing w David

Jennifer Orme-Zavaleta, PhD  
Principal Deputy Assistant Administrator for Science  
Office of Research and Development  
US Environmental Protection Agency

Ex. 6 Personal Privacy (PP)

Ex. 6 Personal Privacy (PP)

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**From:** Christian, Megan  
**Sent:** Wednesday, June 19, 2019 8:08 AM  
**To:** Orme-Zavaleta, Jennifer <Orme-Zavaleta.Jennifer@epa.gov>  
**Cc:** D'Amico, Louis <DAmico.Louis@epa.gov>; Blackburn, Elizabeth <Blackburn.Elizabeth@epa.gov>  
**Subject:** Fwd: RSVPs for Stakeholder Meeting as of 5 pm on 6/18/2019

Stakeholder list as of 540 yesterday

Megan Christian  
Office of Research and Development  
U.S. EPA  
202-564-6184

Begin forwarded message:

**From:** "Otto, Martha" <Otto.Martha@epa.gov>  
**Date:** June 18, 2019 at 5:40:31 PM EDT  
**To:** "Christian, Megan" <Christian.Megan@epa.gov>  
**Cc:** "Grifo, Francesca" <Grifo.Francesca@epa.gov>  
**Subject:** RSVPs for Stakeholder Meeting as of 5 pm on 6/18/2019

Hi, Megan,

Francesca asked me to send the latest list of those who have RSVPed to the Stakeholder meeting. Please see attached. Those shaded in green are participating. Of those, there are 3 groups: in-person, audio, and N/A (which, in this case, means that they didn't specify whether they were attending in person, so we assume that they are). All together, so far, we have 59 who have RSVPed.

Please let me know if you have questions.

Thanks,  
Marti

Martha Otto  
Office of the Science Advisor  
mail code 8105R  
tel: 202.564.2782  
[otto.martha@epa.gov](mailto:otto.martha@epa.gov)

Organization	Contact	Title	Email	RSVP	Date Invite Sent	Year Attended Previously	Notes
American Association for the Advancement of Science (AAAS)	Kei Koizumi	Visting Scholar	<a href="mailto:kkoizumi@aaas.org">kkoizumi@aaas.org</a>	YES	13-Jun	-	N/A
American Association for the Advancement of Science (AAAS)	Joanne Padron Carney	Chief Government Relations Officer	<a href="mailto:jcarney@aaas.org">jcarney@aaas.org</a>	YES	13-Jun	-	in-person
American Chemical Society	Brandi Neifert	Public Policy Associate, External Affairs & Communications, Office of the Sec and Gen Counsel	<a href="mailto:b_neifert@acs.org">b_neifert@acs.org</a>	YES	13-Jun	-	in-person (forwarded invite)
American Chemical Society	Ray Garant	Assistant Director of Public Policy	<a href="mailto:R_Garant@acs.org">R_Garant@acs.org</a>	YES	13-Jun	-	in-person

Contact Information	ID#
Joanne Padrón Carney Chief Government Relations Officer American Association for the Advancement of Science 1200 New York Avenue, NW 20005 Telephone: Ex. 6 Personal Privacy (PP) Email: jcarney@aaas.org	
Brandi Neifert Public Policy Associate   External Affairs & Communications Office of the Secretary and General Counsel American Chemical Society 1155 16th St., NW   Washington   DC 20036 T Ex. 6 Personal Privacy (PP) www.acs.org	

American Chemistry Council	Laura Brust	Assist. General Counsel	<a href="mailto:laura_brust@americanchemistry.com">laura_brust@americanchemistry.com</a>	YES	13-Jun	2015	via audio
American Council on Science and Health	Alex Berezow	Vice President of Scientific Affairs	<a href="mailto:alex@acsh.org">alex@acsh.org</a>	YES	13-Jun	-	via audio
American Forest and Paper Association	Kat Gale	Senior Coordinator, Legal and Public Policy	<a href="mailto:Kat_Gale@afandpa.org">Kat_Gale@afandpa.org</a>	YES			via audio
American Gas Association	Timothy Parr	Senior Counsel	<a href="mailto:tparr@aga.org">tparr@aga.org</a>	YES		-	in-person

<div>Laura A. Brust   American Chemistry Council Assistant General Counsel laura_brust@americanchemistry.com 700 2nd Street, NE   Washington, DC   20002 O: Ex. 6 Personal Privacy (PP) www.americanchemistry.com</div>
<div>Kat Gale Senior Coordinator, Legal and Public Policy Kat_Gale@afandpa.org Ex. 6 Personal Privacy (PP) Phone) AMERICAN FOREST &amp; PAPER ASSOCIATION 1101 K Street, N.W., Suite 700 Washington, D.C. 20005</div>
<div>Timothy Parr   Senior Counsel tparr@aga.org American Gas Association 400 N. Capitol St., NW   Washington, DC   20001 Ex. 6 Personal Privacy (PP) tparr@aga.org</div>



American Geophysical Union	Caitlin Bergstrom	Public Affairs Analyst	<a href="mailto:cbergstrom@agu.org">cbergstrom@agu.org</a>	YES		-	in-person
American Geophysical Union	Randy Showstack	Senior News Writer	<a href="mailto:Rshowstack@agu.org">Rshowstack@agu.org</a>	YES			in-person
American Petroleum Institute	Jessica Ryman-Rasmussen	Science Advisor, Regulatory and Scientific Affairs	<a href="mailto:rymanj@api.org">rymanj@api.org</a>	YES		-	in-person
Association of Public Health Laboratories	(Honorata) Kuki Hansen	Manager of Regulatory & Public Policy	<a href="mailto:kuki.hansen@aphl.org">kuki.hansen@aphl.org</a>	YES	5-Jun	-	via audio
Bipartisan Policy Center	Daniel D'Arcy	Executive Director	<a href="mailto:ddarcy@bipartisanpolicy.org">ddarcy@bipartisanpolicy.org</a>	YES	13-Jun	-	N/A

<div>Caitlin Bergstrom Public Affairs Analyst <div>Ex. 6 Personal Privacy (PP)</div> cbergstrom@agu.org www.agu.org #AGU100 2000 Florida Ave., NW   Washington, DC 20009</div>
<div>Randy Showstack Senior News Writer <div>Ex. 6 Personal Privacy (PP)</div> RShowstack@agu.org www.agu.org #AGU100 2000 Florida Ave., NW; Washington, DC 20009</div>
<div>Jessica Ryman- Rasmussen, PhD, DABT Science Advisor Regulatory and Scientific Affairs API 200 Massachusetts Ave., NW Washington DC 20001 Phone: <div>Ex. 6 Personal Privacy (PP)</div> Fax: www.api.org</div>

California Environmental Protection Agency	Julie Henderson	Deputy Secretary for Health & Public Policy	<a href="mailto:julie.henderson@calepa.ca.gov">julie.henderson@calepa.ca.gov</a>	YES	13-Jun	-	via audio
California Environmental Protection Agency	Lori Lim, Ph.D.	Senior Toxicologist, Pesticide and Food Toxicology Section, Pesticide and Environmental Toxicology Branch, Office of Environmental Health Hazard Assessment	<a href="mailto:Lori.Lim@oehha.ca.gov">Lori.Lim@oehha.ca.gov</a>	YES	?		via audio
Carlin Economics and Science	Alan Carlin	Executive Director	<b>Ex. 6 Personal Privacy (PP)</b>	YES	13-Jun	-	N/A
Climate Science Legal Defense Fund	Lauren Kurtz	Executive Director	<a href="mailto:lkurtz@csldf.org">lkurtz@csldf.org</a>	YES	13-Jun	-	via audio
Committee on Science, Space, and Technology	Sara Palasits	Professional Staff, Oversight Committee, Committee on Sci, Space, & Tech	<a href="mailto:Sara.Palasits@mail.house.gov">Sara.Palasits@mail.house.gov</a>	YES	13-Jun	-	in-person
Competitive Enterprise Institute	Myron Ebell	Director	<a href="mailto:mebell@cei.org">mebell@cei.org</a>	YES	13-Jun	-	N/A
Competitive Enterprise Institute	Marlo Lewis	Senior Fellow	<a href="mailto:marlo.lewis@cei.org">marlo.lewis@cei.org</a>	YES	13-Jun	-	N/A
Competitive Enterprise Institute	Angela Logomasini	Senior Fellow	<a href="mailto:Angela.logomasini@cei.org">Angela.logomasini@cei.org</a>	YES	13-Jun	-	N/A
Competitive Enterprise Institute	Patrick J. Michaels	Senior Fellow	<b>Ex. 6 Personal Privacy (PP)</b>	YES			N/A
Conrad Law and Policy Counsell	Jamie Conrad	Founder	<a href="mailto:jamie@conradcounsel.com">jamie@conradcounsel.com</a>	YES	13-Jun	2015	N/A
Council of Producers and Distributors of Agrotechnology	Gary Halvorson	President	<a href="mailto:ghalvorson@cpda.com">ghalvorson@cpda.com</a>	YES	13-Jun	2015	N/A

California Environmental Protection Agency Sacramento, CA <div>Ex. 6 Personal Privacy (PP)</div> lori.lim@oehha.ca.gov
Sara Palasits Professional Staff, Oversight Subcommittee Committee on Science, Space, and Technology U.S. House of Representatives 202-225-7567 Sara.Palasits@mail.house.gov

CropLife America	Ashley Boles	Counsel	<a href="mailto:aboles@croplifeamerica.org">aboles@croplifeamerica.org</a>	YES	13-Jun	-	via audio
E&E News	Corbin Hiar	Reporter	<a href="mailto:chiar@eenews.net">chiar@eenews.net</a>	YES			in-person
Ecological Society of America	Alison Mize	Director of Public Affairs	<a href="mailto:alison@esa.org">alison@esa.org</a>	YES	13-Jun	-	via audio
Endocrine Society	Joseph Laakso	Director, Science Policy	<a href="mailto:jlaakso@endocrine.org">jlaakso@endocrine.org</a>	YES	13-Jun	-	N/A
Energy and Commerce Committee	Mel Peffers	Brookings LEGIS Fellow	<a href="mailto:mel.peffers@mail.house.gov">mel.peffers@mail.house.gov</a>	YES	17-Jun	-	in-person
Environmental Defense Fund	Lindsay McCormick	Program Manager	<a href="mailto:lmccormick@edf.org">lmccormick@edf.org</a>	YES	13-Jun	-	N/A
Environmental Protection Network	Sebastian Irby	Programs and Operations Manager	<a href="mailto:sebastian.irby@environmentalprotectionnetwork.org">sebastian.irby@environmentalprotectionnetwork.org</a>	YES	13-Jun	-	via audio (Participant Undetermined)
George Washington University Jacobs Institute for Women's Health	Liz Borkowski	Managing Editor, <i>Women's Health Issues</i>	<a href="mailto:borkowsk@gwu.edu">borkowsk@gwu.edu</a>	YES	13-Jun	-	N/A
Government Accountability Project	Mackenzie Battle	Summer Associate	<a href="mailto:Environmentalintern1@whistleblower.org">Environmentalintern1@whistleblower.org</a>	YES	13-Jun	-	in-person

Ashley Boles Counsel CropLife America 1156 15th Street, NW Suite 400 Washington, DC 20005 Direct: Ex. 6 Personal Privacy (PP) Main: (202) 296-1585
Mel Peffers Brookings LEGIS Fellow Energy and Commerce Committee mel.peffers@mail.house.gov 202-225-5630
Sebastian Irby Programs and Operations Manager Environmental Protection Network sebastian.irby@environmentalprotectionnetwork.org Ex. 6 Personal Privacy (PP) tell) www.environmentalprotectionnetwork.org
no additional contact info

Government Accountability Project	Will Halnon	Summer Associate	<a href="mailto:Environmentalintern@whistleblower.org">Environmentalintern@whistleblower.org</a>	YES	13-Jun	-	in-person
Health Effects Institute	Daniel Greenbaum	President	<a href="mailto:dgreenbaum@healtheffects.org">dgreenbaum@healtheffects.org</a>	YES	13-Jun	-	via audio (Participant Undetermined)
House Committee on Science, Space & Technology	Janie Wise Thompson	Subcommittee Staff Director	<a href="mailto:janie.thompson@mail.house.gov">janie.thompson@mail.house.gov</a>	YES	13-Jun	-	N/A
House Staffer, Environment Minority	Priyanka Hooghan	Staff Director - Subcommittee on Environment; Committee on Sci, Space, &Tech	<a href="mailto:Priyanka.Hooghan@mail.house.gov">Priyanka.Hooghan@mail.house.gov</a>	YES	13-Jun	-	via audio
Junkscience.com	Steve Milloy	Editor	Ex. 6 Personal Privacy (PP)	YES	13-Jun	-	in person or via audio
Monsanto	James Nyangulu	U.S. Agencies, Reg. Affairs Manager	<a href="mailto:james.m.nyangulu@monsanto.com">james.m.nyangulu@monsanto.com</a>	YES	13-Jun	2015	N/A
Naphthalene Council, Inc.	Anne LeHuray	Executive Director	<a href="mailto:alehuray@pavementcouncil.org">alehuray@pavementcouncil.org</a>	YES	13-Jun	2015	N/A
New Jersey Department of Environmental Protection	Gloria Post	Research Scientist	<a href="mailto:gloria.post@dep.nj.gov">gloria.post@dep.nj.gov</a>	YES	13-Jun	-	via audio
Proctor and Gamble	Susan Felter	Principal Toxicologist	<a href="mailto:felter.sp@pg.com">felter.sp@pg.com</a>	YES	13-Jun	-	via audio
Project on Government Oversight	Sean Moulton	Senior Policy Analyst	<a href="mailto:smoulton@pogo.org">smoulton@pogo.org</a>	YES	13-Jun	-	N/A
Regulatory Checkbook, Neutral Science	Richard Belzer	Principal Consultant	<a href="mailto:rbbelzer@post.harvard.edu">rbbelzer@post.harvard.edu</a>	YES	13-Jun	-	in-person

no additional contact info
Dan Greenbaum, President Health Effects Institute 75 Federal Street Suite 1400 Boston, MA 02110 O: <div>Ex. 6 Personal Privacy (PP)</div> C: <a href="http://www.healtheffects.org">www.healtheffects.org</a>
Priyanka K. Hooghan Staff Director - Subcommittee on Environment Committee on Science, Space, and Technology U.S. House of Representatives 2321 Rayburn House Office Building Washington, DC 20515 (202) 225-6375 <a href="http://science.house.gov/">http://science.house.gov/</a>



Reuters	Valerie Volcovici		<a href="mailto:valerie.volcovici@thomsonreuters.com">valerie.volcovici@thomsonreuters.com</a>	YES			in-person
Scientific Integrity Institute	James E. Enstrom	President	<a href="mailto:jenstrom@ucla.edu">jenstrom@ucla.edu</a>	YES	13-Jun	-	via audio
Texas Commission on Environmental Quality	Michael Honeycutt	Director, Toxicology Division	<a href="mailto:Michael.Honeycutt@tceq.texas.gov">Michael.Honeycutt@tceq.texas.gov</a>	YES	13-Jun	-	via audio
The Heartland Institute	Aaron Stover	Corporate Relations Officer	<a href="mailto:astover@heartland.org">astover@heartland.org</a>	YES	13-Jun	-	N/A
The Heartland Institute	H. Sterling Burnett	Senior Fellow on Environmental Policy	<a href="mailto:hsburnett@heartland.org">hsburnett@heartland.org</a>	YES	13-Jun	-	via audio
Union of Concerned Scientists	Pamitha D. Weerasinghe	Representative, Center for Science and Democracy	<a href="mailto:Pweerasinghe@ucsusa.org">Pweerasinghe@ucsusa.org</a>	YES	13-Jun	-	N/A
Union of Concerned Scientists	Michael Halpern	Deputy Director of the Center for Science and Integrity	<a href="mailto:mhalpern@ucsusa.org">mhalpern@ucsusa.org</a>	YES	13-Jun	-	in-person
Union of Concerned Scientists	Jacob Carter	Research Scientist, Center for Science and Democracy	<a href="mailto:jcarter@ucsusa.org">jcarter@ucsusa.org</a>	YES	13-Jun	-	in-person
United States Energy Association	Ryan LaCoe	Staff	<a href="mailto:rlacoe@usea.org">rlacoe@usea.org</a>	YES	13-Jun	-	in-person
University of Hartford	Laurence Gould	Professor	<a href="mailto:lgould@hartford.edu">lgould@hartford.edu</a>	YES	13-Jun	-	in-person

Michael Honeycutt, Ph.D. Director, Toxicology, Risk Assessment, and Research Division Texas Commission on Environmental Quality Phone: <div>Ex. 6 Personal Privacy (PP)</div> Mobile: E-Mail: michael.honeycutt@tceq.texas.gov
H. Sterling Burnett, Ph.D., Senior Fellow, Heartland Institute, (214) 909-2368
Jacob Carter, Ph.D. Research Scientist, Center for Science and Democracy Union of Concerned Scientists   1825 K Street NW, Suite 800   Washington, DC 20006 P: <div>Ex. 6 Personal Privacy (PP)</div> E: JCarter@ucsusa.org

US Chamber of Commerce, Economic Policy Division	Joseph Johnson	Executive Director	<a href="mailto:jjohnson@uschamber.com">jjohnson@uschamber.com</a>	YES	13-Jun	-	N/A
US House of Representatives	Congressman Paul Tonko	U.S. Congressman		YES	13-Jun	-	in-person
US House of Representatives	Emily Silverberg	Senior Legislative Assistant to Rep. Tonko	<a href="mailto:emily.silverberg@mail.house.gov">emily.silverberg@mail.house.gov</a>	YES	13-Jun	-	in-person
US House of Representatives	Kira Vuille-Kowing	Senior Legislative Assistant to Rep. Tonko	<a href="mailto:Kira.Vuille-Kowing@mail.house.gov">Kira.Vuille-Kowing@mail.house.gov</a>	YES	13-Jun	-	in-person
US House of Representatives	Matt Sonneborn	Communications Director to Rep. Tonko	<a href="mailto:matt.sonneborn@mail.house.gov">matt.sonneborn@mail.house.gov</a>	Yes	13-Jun	-	via audio
Afton Chemical Corporation	Athena Keene	Sr. Toxicologist	<b>Ex. 6 Personal Privacy (PP)</b>	NO	13-Jun	2015	N/A
American Association of Petroleum Geologists	David Curtiss	Executive Director	<a href="mailto:dcurtiss@aapg.org">dcurtiss@aapg.org</a>	NO	13-Jun	-	N/A
American Beverage Association	Maia Jack	VP, Science and Reg. Affairs	<a href="mailto:Mjack@ameribev.org">Mjack@ameribev.org</a>	NO	13-Jun	2015	N/A
American Chemical Society	Anthony Pitagno	Director Gov. Affairs and Alliances	<a href="mailto:a_pitagno@acs.org">a_pitagno@acs.org</a>	NO	13-Jun	-	N/A

Joseph Johnson, Ph. D. Executive Director, Federal Regulatory Process Review & Analysis U.S. Chamber of Commerce Economic Policy Division Ex. 6 Personal Privacy (PP)
Use Emily Silverberg's contact info for Tonko, Silverberg, and Vuille- Kowing
Emily Duhovny Silverberg Senior Legislative Assistant Congressman Paul D. Tonko (NY-20) Emily.Silverberg@mail.house.gov 2369 Rayburn HOB, Washington, DC 20515 Ex. 6 Personal Privacy (PP)
See Emily Silverberg's contact information. Emily RSVPed for Tonko, Silverberg, Vuille-Kowing.
Matt Sonneborn, Communications Director Congressman Paul D. Tonko (NY-20) 2369 Rayburn HOB, Washington, DC 20515 t Ex. 6 Personal Privacy (PP)

American Chemical Society	Caroline Trupp Gil	Gov. Affairs	<a href="mailto:c_TruppGil@acs.org">c_TruppGil@acs.org</a>	NO	13-Jun	-	N/A (forwarded invite)
American Chemical Society Green Chemical Institute	Dr. Mary Kirchhoff	Director	<a href="mailto:M_Kirchhoff@acs.org">M_Kirchhoff@acs.org</a>	NO	13-Jun	-	N/A
American Chemistry Council	Rick Becker	Toxicologist	<a href="mailto:Rick_Becker@americanchemistry.com">Rick_Becker@americanchemistry.com</a>	NO	13-Jun	2015	N/A
American Chemistry Council	Kimberly White	Senior Director	<a href="mailto:Kimberly_White@americanchemistry.com">Kimberly_White@americanchemistry.com</a>	NO	13-Jun	2016	N/A
American Chemistry Council	Neeraja Erraguntla	Director, Chemical Products and Technology Division	<a href="mailto:Neeraja_Erraguntla@americanchemistry.com">Neeraja_Erraguntla@americanchemistry.com</a>	NO	13-Jun	2016	N/A
American Chemistry Council	Has Shah	Senior Director	<a href="mailto:Has_Shah@americanchemistry.com">Has_Shah@americanchemistry.com</a>	NO	13-Jun	2015	N/A
American Cleaning Institute	Melissa Hockstad	President/CEO	<a href="mailto:mhockstad@cleaninginstitute.org">mhockstad@cleaninginstitute.org</a>	NO	13-Jun	-	N/A
American Composites Manufacturer's Association (ACMA)	John Schweitzer	Coordinator, Composite Growth Initiative	<a href="mailto:jschweitzer@acmanet.org">jschweitzer@acmanet.org</a>	NO	13-Jun	2015	N/A
American Enterprise Institute (AEI)	Ben Zycher	Resident Scholar	<a href="mailto:Benjamin.Zycher@AEI.org">Benjamin.Zycher@AEI.org</a>	NO	13-Jun	-	N/A
American Federation of Labor and Congress of Industrial Organizations	Peg Seminario	Director of Occupational Safety	<a href="mailto:pseminar@aflcio.org">pseminar@aflcio.org</a>	NO	13-Jun	-	N/A
American Forest and Paper Association	Paul Noe		<a href="mailto:paul_noe@afandpa.org">paul_noe@afandpa.org</a>	NO	13-Jun	-	N/A
American Forest and Paper Association	Stewart Holm	Chief Scientist	<a href="mailto:stewart_holm@afandpa.org">stewart_holm@afandpa.org</a>	NO	13-Jun	-	N/A
American Gas Association	Pam Lacey	Senior Managing Counsel	<a href="mailto:placey@aga.org">placey@aga.org</a>	NO	13-Jun	-	N/A
American Geophysical Union	Alexandra Shultz	Director of Public Affairs	<a href="mailto:ashultz@agu.org">ashultz@agu.org</a>	NO	13-Jun	-	N/A
American Heart Association	Stuart Berlow	Senior Director, Gov. Relations	<a href="mailto:stuart.berlow@heart.org">stuart.berlow@heart.org</a>	NO	13-Jun	-	N/A
American Institute of Biological Sciences	Robert Gropp	Executive Director	<a href="mailto:rgropp@aibs.org">rgropp@aibs.org</a>	NO	13-Jun	-	N/A

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American Lung Association	Paul Billings	Senior VP for Advocacy	<a href="mailto:paul.billings@lung.org">paul.billings@lung.org</a>	NO	13-Jun	-	N/A
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American Petroleum Institute	Derek Swick	Manager, Scientific and Regulatory Affairs	<a href="mailto:swickd@api.org">swickd@api.org</a>	NO	13-Jun	-	N/A
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American Physical Society	Francis Slakey	Chief Gov. Affairs Officer	<a href="mailto:slakey@aps.org">slakey@aps.org</a>	NO	13-Jun	-	N/A
American Public Health Association	Donald Hoppert	Dir. Of Gov. Relations	<a href="mailto:donald.hoppert@apha.org">donald.hoppert@apha.org</a>	NO	13-Jun	-	N/A
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Apple	Tim Powderly	Regulatory Affairs	Ex. 6 Personal Privacy (PP)	NO	13-Jun	-	N/A
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Association of Air Pollution Control Agencies	Jason Sloan	Executive Director	<a href="mailto:jsloan@csg.org">jsloan@csg.org</a>	NO	13-Jun	-	N/A
Association of Public Health Laboratories	Julianne Nassif	Director of Environmental Health	<a href="mailto:julianne.nassif@aphl.org">julianne.nassif@aphl.org</a>	NO	13-Jun	-	N/A
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Autocare Association	Aaron Lowe	Senior Vice President, Regulatory and Governmental Affairs	<a href="mailto:aaron.lowe@autocare.org">aaron.lowe@autocare.org</a>	NO	13-Jun	-	N/A
Basel Action Network	Jim Puckett	Executive Director	<a href="mailto:jpuckett@ban.org">jpuckett@ban.org</a>	NO	13-Jun	-	N/A
Battelle Memorial Institute	Lou Von Thaer	President/Chief Exec. Officer	<a href="mailto:delaneyk@battelle.org">delaneyk@battelle.org</a>	NO	13-Jun	-	N/A
Bayer	Ray Kerins	Sen. VP/Head of Communications and Gov. Relations U.S.	<a href="mailto:ray.kerins@bayer.com">ray.kerins@bayer.com</a>	NO	13-Jun	-	N/A
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California Department of Health	Karen Smith	Director and State Public Health Officer	<a href="mailto:karen.smith@cdph.ca.gov">karen.smith@cdph.ca.gov</a>	NO	13-Jun	-	N/A
California Environmental Protection Agency	Lauren Zeise	Dir. Office of Envir. Health Hazard Assessment	<a href="mailto:lauren.zeise@oehha.ca.gov">lauren.zeise@oehha.ca.gov</a>	NO	13-Jun	-	N/A
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Center for Energy Competitiveness	David Stevenson	Director	<b>Ex. 6 Personal Privacy (PP)</b>	NO	13-Jun	-	N/A
Center for Open Science	Brian Nosek	Executive Director	<a href="mailto:nosek@cos.io">nosek@cos.io</a>	NO	13-Jun	-	N/A
Center for Progressive Reform	Matthew Shudtz	Executive Director	<a href="mailto:mshudtz@progressivereform.org">mshudtz@progressivereform.org</a>	NO	13-Jun	-	N/A
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Children's Environmental Health Network	Nse Witherspoon	Executive Director	Ex. 6 Personal Privacy (PP)	NO	13-Jun	-	N/A
Citizens for Responsibility and Ethics in Washington	Anne Weismann	Chief FOIA Counsel	<a href="mailto:aweismann@citizensforethics.org">aweismann@citizensforethics.org</a>	NO	13-Jun	-	N/A
Climate Physics LLC	Edwin Berry	CEO	<a href="mailto:ed@edberry.com">ed@edberry.com</a>	NO	13-Jun	-	N/A
Committee For A Constructive Tomorrow	Paul Driessen	Senior Policy Advisor	Ex. 6 Personal Privacy (PP)	NO	13-Jun	-	N/A
CropLife America	Courtney DeMarco	Science and Reg. Coordinator	<a href="mailto:cdemarco@croplifeamerica.org">cdemarco@croplifeamerica.org</a>	NO	13-Jun	2016	N/A
D.C. Department of Energy and Environment	Tommy Wells	Director	<a href="mailto:Tommy.Wells@dc.gov">Tommy.Wells@dc.gov</a>	NO	13-Jun	-	N/A
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Electric Power Research Institute	Michael Howard	President/CEO	<a href="mailto:mhoward@epri.com">mhoward@epri.com</a>	NO	13-Jun	-	N/A
Electric Power Research Institute	Annette Rohr	Principal Project Manager Air Quality and Health	<a href="mailto:arohr@epri.com">arohr@epri.com</a>	NO	13-Jun	-	N/A
Emeritus University of Connecticut	Howard "Cork" Hayden	Professor Emeritus	Ex. 6 Personal Privacy (PP)	NO	13-Jun	-	N/A
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This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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ExxonMobil	Marusia Popovech	Senior Toxicologist	<a href="mailto:mary.a.popovech@exxonmobil.com">mary.a.popovech@exxonmobil.com</a>	NO	13-Jun	2015	N/A
ExxonMobil	Rebecca Alyea	Product Stewardship and Reg. Affairs Advisor	<a href="mailto:rebecca.a.alysa@exxonmobil.com">rebecca.a.alysa@exxonmobil.com</a>	NO	13-Jun	2016	N/A
Federation of American Societies for Experimental Biology	Howard Garrison	Director of Office of Public Affairs	<a href="mailto:hgarrison@faseb.org">hgarrison@faseb.org</a>	NO	13-Jun	-	N/A
Federation of American Societies for Experimental Biology	Yvette Seger	Director of Science Policy	<a href="mailto:yseger@faseb.org">yseger@faseb.org</a>	NO	13-Jun	-	N/A
FMC Corporation	Paul Whatling	Senior Global Reg. Tech. Manager	<a href="mailto:paul.whatling@fmc.com">paul.whatling@fmc.com</a>	NO	13-Jun	2016	N/A
Food and Water Watch	Tony Corbo	Senior Lobbyist	<a href="mailto:tcorbo@fwwatch.org">tcorbo@fwwatch.org</a>	NO	13-Jun	-	N/A
GE	Del Renigar	Counsel, Govt. Affairs	<a href="mailto:del.renigar@ge.com">del.renigar@ge.com</a>	NO	13-Jun	-	in-person
George Washington University Milken Institute of Public Health	George Gray		<a href="mailto:ggray@gwu.edu">ggray@gwu.edu</a>	NO	13-Jun	-	N/A
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Greenpeace USA	Tim Donaghy	Senior Research Scientist	Ex. 6 Personal Privacy (PP)	NO	13-Jun	-	N/A
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Heritage Foundation	Kevin Dayaratna	Senior Statistician and Research Programmer	<a href="mailto:kevin.Dayaratna@heritage.org">kevin.Dayaratna@heritage.org</a>	NO	13-Jun	-	in-person
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International Union, UAW	Darius Sivin	Environmental and Occupational Health Safety Scientist	<a href="mailto:dsivin@uaw.net">dsivin@uaw.net</a>	NO	13-Jun	-	N/A
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Johns Hopkins Bloomberg School of Public Health	Ellen Silberberg	Associate Professor	<a href="mailto:esilber2@jhu.edu">esilber2@jhu.edu</a>	NO	13-Jun	-	N/A

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Maryland Department of the Environment	Horatio Tablada	Deputy Secretary	<a href="mailto:horacio.tablada@maryland.gov">horacio.tablada@maryland.gov</a>	NO	13-Jun	-	N/A
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Missouri Department of Natural Resources	Ed Galbraith	Director, Division of Environmental Quality	<a href="mailto:ed.galbraith@dnr.mo.gov">ed.galbraith@dnr.mo.gov</a>	NO	13-Jun	-	N/A
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National Partnership for Women and Families	Shaina Goodman	Director of Policy	<a href="mailto:sgoodman@nationalpartnership.org">sgoodman@nationalpartnership.org</a>	NO	13-Jun	-	N/A
National Science Policy Network	Avital Percher	CEO	Ex. 6 Personal Privacy (PP)	NO	13-Jun	-	N/A
National Wildlife Federation	Bruce Stein	Chief Scientist and Associate VP	<a href="mailto:steinb@nwf.org">steinb@nwf.org</a>	NO	13-Jun	-	N/A
Natural Resources Defense Council	Jennifer Sass	Senior Scientist	<a href="mailto:jsass@nrdc.org">jsass@nrdc.org</a>	NO	13-Jun	-	N/A
Natural Resources Defense Council	Roland Hwang	Director of Climate and Clean Energy Program	<a href="mailto:nhwang@nrdc.org">nhwang@nrdc.org</a>	NO	13-Jun	-	N/A
Natural Resources Defense Council	Vijay Limaye	Environmental Health Scientist	<a href="mailto:vlimaye@nrdc.org">vlimaye@nrdc.org</a>	NO	13-Jun	-	N/A
New York Department of Environmental Conservation	Erica Ringewald	Deputy Commissioner for Communications	<a href="mailto:erica.ringewald@dec.ny.gov">erica.ringewald@dec.ny.gov</a>	NO	13-Jun	-	N/A
New York Department of Health	Gary Holmes	Assistant Commissioner for Communications	<a href="mailto:gary.holmes@health.ny.gov">gary.holmes@health.ny.gov</a>	NO	13-Jun	-	N/A
North Carolina Department of Environmental Quality	Joy Hicks	Senior Director for Governmental Affairs and Policy	<a href="mailto:joy.hicks@ncdenr.gov">joy.hicks@ncdenr.gov</a>	NO	13-Jun	-	N/A

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.

North Carolina Dept of Agriculture & Consumer Services	Andrea Ashby	Director Public Affairs	<a href="mailto:Andrea.Ashby@ncagr.gov">Andrea.Ashby@ncagr.gov</a>	NO	13-Jun	-	N/A
Nuclear Regulatory Committee	Darrell Adams	Congressional/External Affairs Officer	<a href="mailto:oca_web@nrc.gov">oca_web@nrc.gov</a>	NO	13-Jun	-	N/A
NW Maps Co	Bob Zybach	President	<a href="mailto:zybachb@nwmapsc.com">zybachb@nwmapsc.com</a>	NO	13-Jun	-	N/A
Oil Spill Recovery Institute	Katrina Hoffman	Executive Director	<a href="mailto:khoffman@pwssc.org">khoffman@pwssc.org</a>	NO	13-Jun	-	N/A
Olin Corporation	Michael Meenan	Director of Gov. Affairs	<a href="mailto:mmeenana@olin.com">mmeenana@olin.com</a>	NO	13-Jun	-	N/A
Open the Government	Lisa Rosenberg	Executive Director	<a href="mailto:lrosenberg@openthegovernment.org">lrosenberg@openthegovernment.org</a>	NO	13-Jun	-	N/A
Open the Government	Emily Manna	Policy Analyst	<a href="mailto:emanna@openthegovernment.org">emanna@openthegovernment.org</a>	NO	13-Jun	-	N/A
Open the Government	Patrice McDermott	Executive Director	<a href="mailto:pmcdermott@govinfowatch.net">pmcdermott@govinfowatch.net</a>	NO	13-Jun	-	N/A
PES Environmental	Robert S. Creps	Engineer	<a href="mailto:rcreps@pesenv.com">rcreps@pesenv.com</a>	NO	13-Jun	-	N/A
Pesticide Action Network	Kristin Schafer	Executive Director	<a href="mailto:ahna@panna.org">ahna@panna.org</a>	NO	13-Jun	-	N/A
Pfizer	Jessica Smith	Media Relations	<a href="mailto:jessica.m.smith@pfizer.com">jessica.m.smith@pfizer.com</a>	NO	13-Jun	-	N/A
Physicians for Social Responsibility	Jeff Carter	Executive Director	<a href="mailto:jcarter@psr.org">jcarter@psr.org</a>	NO	13-Jun	-	N/A
Proctor and Gamble	Sean Broderick	Associate Director, U.S Federal Regulatory Affairs	<a href="mailto:Broderick.sp@pg.com">Broderick.sp@pg.com</a>	NO	13-Jun	2015	N/A
Proctor and Gamble	Julie Froelicher		<a href="mailto:froelicher.jm@pg.com">froelicher.jm@pg.com</a>	NO	13-Jun	-	N/A
Proctor and Gamble	Alex Malouf	Media Relations	<a href="mailto:Malouf.ag@pg.com">Malouf.ag@pg.com</a>	NO	13-Jun	2015	N/A
Program on Climate and Health (George Mason University)	Edward Maibach	Director	<a href="mailto:emaibach@gmu.edu">emaibach@gmu.edu</a>	NO	13-Jun	-	N/A
Project on Government Oversight	Danielle Brian	Executive Director	<a href="mailto:danielle@pogo.org">danielle@pogo.org</a> ; <a href="mailto:dbrian@pogo.org">dbrian@pogo.org</a>	NO	13-Jun	-	N/A
Project on Government Oversight	Rebecca "Becca" Jones	Policy Counsel	<a href="mailto:rjones@pogo.org">rjones@pogo.org</a>	NO	13-Jun	-	N/A
Project on Government Oversight	Laura Peterson	Investigator	<a href="mailto:lpeterson@pogo.org">lpeterson@pogo.org</a>	NO	13-Jun	-	N/A
Public Citizen	Sidney Wolfe		<a href="mailto:swolfe@citizen.org">swolfe@citizen.org</a>	NO	13-Jun	-	N/A
Public Citizen	Lisa Gilbert		<a href="mailto:lgilbert@citizen.org">lgilbert@citizen.org</a>	NO	13-Jun	-	N/A

called, but unable to get info
unable to find contact info



Public Citizen	Susan Harley		<a href="mailto:sharley@citizen.org">sharley@citizen.org</a>	NO	13-Jun	-	N/A
Public Citizen	Shanna Devine		<a href="mailto:sdevine@citizen.org">sdevine@citizen.org</a>	NO	13-Jun	-	N/A
Public Employees for Environmental Responsibility	Tim Whitehouse	Deputy Executive Director	<a href="mailto:twhitehouse@peer.org">twhitehouse@peer.org</a>	NO	13-Jun	-	N/A
Public Member ACC SST	Larry Reiter		<a href="mailto:lreiter@uthsc.edu">lreiter@uthsc.edu</a>	NO	13-Jun	2015	N/A
Regnet Environmental Services	Robert Fensterheim	President	<a href="mailto:rfensterheim@regnet.com">rfensterheim@regnet.com</a>	NO	13-Jun	2015	N/A
Reporters Committee for Freedom of the Press	Katie Townsend	Legal Director	<a href="mailto:ktownsend@rcfp.org">ktownsend@rcfp.org</a>	NO	13-Jun	-	N/A
Resources for the Future	Margaret Walls	Senior Fellow	<a href="mailto:walls@rff.org">walls@rff.org</a>	NO	13-Jun	-	N/A
Retired DOE	Ronald Sundelin		Ex. 6 Personal Privacy (PP)	NO	13-Jun	-	N/A
Retired NASA	Hal Doiron			NO	13-Jun	-	N/A
Retired NASA	Ferenc Miskolczi			NO	13-Jun	-	N/A
Richard Belzer Consulting	Richard B. Belzer	Regulation & Risk Consultant	<a href="mailto:rbbelzer@post.harvard.edu">rbbelzer@post.harvard.edu</a>	NO	13-Jun	-	N/A
Safer Chemicals Healthy Families	Liz Hitchcock	Executive Director	<a href="mailto:lzhitchcock@saferchemicals.org">lzhitchcock@saferchemicals.org</a>	NO	13-Jun	-	N/A
Schnare Law	David Schnare	General Counsel	Ex. 6 Personal Privacy (PP)	NO	13-Jun	-	in-person
Science and Environmental Policy Project	Kenneth Haapala	President	<a href="mailto:ken@sepp.org">ken@sepp.org</a>	NO	13-Jun	-	N/A
SESMI	Scott Davis		<a href="mailto:sdavis@sesmi.com">sdavis@sesmi.com</a>	NO	13-Jun	-	N/A
Shell Oil Company	Stuart Cagen	Toxicologist	<a href="mailto:stuart.cagen@shell.com">stuart.cagen@shell.com</a>	NO	13-Jun	2015	N/A
Sierra Club	Liz Perera	Climate Policy Director	<a href="mailto:liz.perera@sierraclub.org">liz.perera@sierraclub.org</a>	NO	13-Jun	-	N/A
Silent Spring Institute	Julia Brody	Executive Director	<a href="mailto:brody@silentspring.org">brody@silentspring.org</a>	NO	13-Jun	-	N/A
Society for Conservation Biology	Debra Luke	Executive Director	<a href="mailto:info@conbio.org">info@conbio.org</a>	NO	13-Jun	-	N/A
Society of Chemical Manufacturers and Affiliates	Jennifer Abril	President/CEO	<a href="mailto:info@socma.com">info@socma.com</a>	NO	13-Jun	-	N/A
Society of Environmental Journalists	Joe Davis	Director/Editor	Ex. 6 Personal Privacy (PP) <a href="mailto:jdavis@sej.org">jdavis@sej.org</a>	NO	13-Jun	-	N/A
Society of Environmental Toxicology and Chemistry	Charlie Menzie	Global Executive Director	<a href="mailto:charlie.menzie@setac.org">charlie.menzie@setac.org</a>	NO	13-Jun	-	N/A



Society of Professional Journalists	Alex Tarquinio	National Director	<a href="mailto:atarquinio@spj.org">atarquinio@spj.org</a>	NO	13-Jun	-	N/A
Society of Professional Journalists	Jennifer Royer	Director of Communications and Marketing	<a href="mailto:jroyer@hq.spj.org">jroyer@hq.spj.org</a>	NO	13-Jun	-	N/A
Solid Waste Association of North America	David Biderman	Executive Director/CEO	<a href="mailto:dbiderman@swana.org">dbiderman@swana.org</a>	NO	13-Jun	-	N/A
Spark of Freedom Foundation	James Taylor	President	Ex. 6 Personal Privacy (PP)	NO	13-Jun	-	N/A
Sumitomo	Jewelle Yamada	Media Relations	<a href="mailto:jewelle-k.yamada@sumitomocorp.com">jewelle-k.yamada@sumitomocorp.com</a>	NO	13-Jun	2015	N/A
Summit Tox	Lesa Aylward	Principal	<a href="mailto:lajlward@summittotoxicology.com">lajlward@summittotoxicology.com</a>	NO	13-Jun	2015	N/A
Sunlight Foundation	Rachel Bergman	Director, Web Integrity Project	<a href="mailto:rbergman@sunlightfoundation.com">rbergman@sunlightfoundation.com</a>	NO	13-Jun	-	N/A
Syngenta	Paul Minehart	Head Corp. Communications	<a href="mailto:Paul.Minehart@syngenta.com">Paul.Minehart@syngenta.com</a>	NO	13-Jun	-	N/A
The Dow Chemical Company	Katie Coady	Environmental Toxicologist	<a href="mailto:kcoady@dow.com">kcoady@dow.com</a>	NO	13-Jun	2015	N/A
The Dow Chemical Company	Joanna Klapacz	Toxicology Consultant	<a href="mailto:jklapacz@dow.com">jklapacz@dow.com</a>	NO	13-Jun	2015	N/A
The Heartland Institute	Veronica Harrison	Marketing Director	<a href="mailto:vharrison@heartland.org">vharrison@heartland.org</a>	NO	13-Jun	-	N/A
The Heartland Institute	Jim Lakely	Director of Communications	<a href="mailto:jlakely@heartland.org">jlakely@heartland.org</a>	NO	13-Jun	-	in-person
The Heartland Institute	Joseph Bast	Director, Senior Fellow	<a href="mailto:jbast@heartland.org">jbast@heartland.org</a>	NO	13-Jun	-	N/A
The Heartland Institute	Norman Rogers	Policy Advisor	Ex. 6 Personal Privacy (PP)	NO	13-Jun	-	N/A
The Johns Hopkins University	Martin Stephens	Senior Research Associate	<a href="mailto:msteph14@jhu.edu">msteph14@jhu.edu</a>	NO	13-Jun	2015	N/A
The Medical Society Consortium on Climate & Health	Mona Sarfaty	Director	<a href="mailto:msarfaty@gmu.edu">msarfaty@gmu.edu</a>	NO	13-Jun	-	N/A
The Water Research Foundation	Peter Grevatt	CEO	<a href="mailto:pgrevatt@waterrf.org">pgrevatt@waterrf.org</a>	NO	13-Jun	-	N/A
Thermo Fisher Scientific, Inc.	Laura Bright	Media Relations	<a href="mailto:laura.bright@thermofisher.com">laura.bright@thermofisher.com</a>	NO	13-Jun	-	N/A

Ex. 6 Personal Privacy (PP) i, called but no response
unable to find contact info

Toxics Use Reduction Institute	Gregory Morose	Research Manager	<a href="mailto:Gregory_Morose@uml.edu">Gregory_Morose@uml.edu</a>	NO	13-Jun	-	N/A
Trust for America's Health	John Auerbach	Pres./CEO	<a href="mailto:jauerbach@tfah.org">jauerbach@tfah.org</a>	NO	13-Jun	-	N/A
Unilever		Media Relations	<a href="mailto:mediarelations.usa@unilever.com">mediarelations.usa@unilever.com</a>	NO	13-Jun	-	N/A
Union of Concerned Scientists	Gretchen Goldman	Research Director	<a href="mailto:ggoldman@ucsusa.org">ggoldman@ucsusa.org</a>	NO	13-Jun	-	N/A
University of Missouri	Anthony Lupo	Professor	<a href="mailto:lupoa@missouri.edu">lupoa@missouri.edu</a>	NO	13-Jun	-	N/A
US Naval Academy	Mark Campbell	Professor	<a href="mailto:campbell@usna.edu">campbell@usna.edu</a>	NO	13-Jun	-	N/A
Virginia Department of Environmental Quality	David Paylor	Director	<a href="mailto:dkpaylor@deg.virginia.gov">dkpaylor@deg.virginia.gov</a>	NO	13-Jun	-	N/A
Virginia Department of Mines, Minerals, and Energy	John Warren	Director	<a href="mailto:john.warren@dmme.virginia.gov">john.warren@dmme.virginia.gov</a>	NO	13-Jun	-	N/A
Washington State Department of Ecology	Maia Bellon	Director	<a href="mailto:maia.bellon@ecy.wa.gov">maia.bellon@ecy.wa.gov</a>	NO	13-Jun	-	N/A
Water Environment Federation	Eileen O'Neill	Executive Director	<a href="mailto:inquiry@wef.org">inquiry@wef.org</a>	NO	13-Jun	-	N/A
Water Quality Assn.	Pauli Undesser	Executive Director	<a href="mailto:pundesser@wqa.org">pundesser@wqa.org</a>	NO	13-Jun	-	N/A
Wisconsin Public Radio	Steve Paulson	Executive Producer	<a href="mailto:paulson@wpr.org">paulson@wpr.org</a>	NO	13-Jun	-	N/A
World Resources Institute	Janet Ranganathan	Vice President for Science and Resources	<a href="mailto:janetr@wri.org">janetr@wri.org</a>	NO	13-Jun	-	N/A

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins or other markings visible.

## Message

**From:** Dunlap, David [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=591EB15A268249DDA0C05A7451F765C3-DUNLAP, DAV]  
**Sent:** 11/8/2018 7:17:07 PM  
**To:** Konkus, John [konkus.john@epa.gov]; Block, Molly [block.molly@epa.gov]; Woods, Clint [woods.Clint@epa.gov]; Bolen, Brittany [bolen.brittany@epa.gov]  
**CC:** Hewitt, James [hewitt.james@epa.gov]; Abboud, Michael [abboud.michael@epa.gov]; Beach, Christopher [beach.christopher@epa.gov]  
**Subject:** RE: Strengthening Transparency in Regulatory Science/ Media request

Ex. 5 Deliberative Process (DP)

**From:** Konkus, John  
**Sent:** Thursday, November 8, 2018 2:16 PM  
**To:** Block, Molly <block.molly@epa.gov>; Woods, Clint <woods.Clint@epa.gov>; Dunlap, David <dunlap.david@epa.gov>; Bolen, Brittany <bolen.brittany@epa.gov>  
**Cc:** Hewitt, James <hewitt.james@epa.gov>; Abboud, Michael <abboud.michael@epa.gov>; Beach, Christopher <beach.christopher@epa.gov>  
**Subject:** RE: Strengthening Transparency in Regulatory Science/ Media request

Ex. 5 Deliberative Process (DP)

**From:** Block, Molly  
**Sent:** Thursday, November 8, 2018 2:15 PM  
**To:** Woods, Clint <woods.Clint@epa.gov>; Dunlap, David <dunlap.david@epa.gov>; Bolen, Brittany <bolen.brittany@epa.gov>  
**Cc:** Hewitt, James <hewitt.james@epa.gov>; Abboud, Michael <abboud.michael@epa.gov>; Konkus, John <konkus.john@epa.gov>; Beach, Christopher <beach.christopher@epa.gov>  
**Subject:** RE: Strengthening Transparency in Regulatory Science/ Media request

## Ex. 5 Deliberative Process (DP)

Are you good with that?

**From:** Block, Molly  
**Sent:** Thursday, November 8, 2018 10:57 AM  
**To:** Woods, Clint <woods.Clint@epa.gov>; Dunlap, David <dunlap.david@epa.gov>; Bolen, Brittany <bolen.brittany@epa.gov>  
**Cc:** Hewitt, James <hewitt.james@epa.gov>; Abboud, Michael <abboud.michael@epa.gov>; Konkus, John <konkus.john@epa.gov>; Beach, Christopher <beach.christopher@epa.gov>  
**Subject:** RE: Strengthening Transparency in Regulatory Science/ Media request

## Ex. 5 Deliberative Process (DP)

**From:** Woods, Clint  
**Sent:** Thursday, November 8, 2018 10:56 AM  
**To:** Block, Molly <block.molly@epa.gov>; Dunlap, David <dunlap.david@epa.gov>; Bolen, Brittany

<bolen.brittany@epa.gov>

Cc: Hewitt, James <hewitt.james@epa.gov>; Abboud, Michael <abboud.michael@epa.gov>; Konkus, John <konkus.john@epa.gov>; Beach, Christopher <beach.christopher@epa.gov>

**Subject:** RE: Strengthening Transparency in Regulatory Science/ Media request

+ Brittany.

Molly will be sending around a high level process response

**Ex. 5 Deliberative Process (DP)**

**Ex. 5 Deliberative Process (DP)**

---

**From:** Block, Molly

**Sent:** Thursday, November 8, 2018 10:26 AM

**To:** Dunlap, David <dunlap.david@epa.gov>; Woods, Clint <woods.clint@epa.gov>

**Cc:** Hewitt, James <hewitt.james@epa.gov>; Abboud, Michael <abboud.michael@epa.gov>; Konkus, John <konkus.john@epa.gov>; Beach, Christopher <beach.christopher@epa.gov>

**Subject:** FW: Strengthening Transparency in Regulatory Science/ Media request

**Ex. 5 Deliberative Process (DP)**

---

**From:** Rust, Susanne <susanne.rust@latimes.com>

**Sent:** Thursday, November 8, 2018 10:25 AM

**To:** Block, Molly <block.molly@epa.gov>

**Cc:** Press <Press@epa.gov>

**Subject:** Re: Strengthening Transparency in Regulatory Science/ Media request

Hi,

I have information suggesting that Steve Milloy and Edward Calabrese were instrumental in crafting the ruling's suggestion to incorporate risk models other than LNT.

I wonder if you could tell me what their role was in crafting the rule and and who solicited their input?

Thank you.

Susanne

---

**From:** Rust, Susanne

**Sent:** Thursday, November 8, 2018 6:27:41 AM

**To:** Block, Molly

**Cc:** Press

**Subject:** Re: Strengthening Transparency in Regulatory Science/ Media request

Understood. Still wondering when a final ruling or decision is expected?



**From:** Block, Molly <[block.molly@epa.gov](mailto:block.molly@epa.gov)>  
**Sent:** Thursday, November 8, 2018 6:27:01 AM  
**To:** Rust, Susanne  
**Cc:** Press  
**Subject:** RE: Strengthening Transparency in Regulatory Science/ Media request

As we've stated before, we are currently reviewing 590,000 public comments on the proposal.

---

**From:** Rust, Susanne <[susanne.rust@latimes.com](mailto:susanne.rust@latimes.com)>  
**Sent:** Thursday, November 8, 2018 9:26 AM  
**To:** Block, Molly <[block.molly@epa.gov](mailto:block.molly@epa.gov)>  
**Cc:** Press <[Press@epa.gov](mailto:Press@epa.gov)>  
**Subject:** Re: Strengthening Transparency in Regulatory Science/ Media request

Hi -

Any idea when the EPA will make a decision or submit a final ruling?

Thank you.

---

**From:** Block, Molly <[block.molly@epa.gov](mailto:block.molly@epa.gov)>  
**Sent:** Wednesday, November 7, 2018 1:14:50 PM  
**To:** Rust, Susanne  
**Cc:** Press  
**Subject:** RE: Strengthening Transparency in Regulatory Science/ Media request

This should be helpful for you:

The proposed regulation takes comment on ensuring transparency and consideration of high quality studies evaluating models and model assumptions, including high quality studies that examine different potential dose-response relationships. You need look no further than the 590,000 public comments provided to EPA on this proposal to see literally thousands of different viewpoints on particular studies, and the EPA is currently reviewing all of those comments to ensure the best proposal is put forward.

---

**From:** Rust, Susanne <[susanne.rust@latimes.com](mailto:susanne.rust@latimes.com)>  
**Sent:** Wednesday, November 7, 2018 3:18 PM  
**To:** Block, Molly <[block.molly@epa.gov](mailto:block.molly@epa.gov)>  
**Cc:** Press <[Press@epa.gov](mailto:Press@epa.gov)>  
**Subject:** Re: Strengthening Transparency in Regulatory Science/ Media request

Hi

Ha. No. I'm not suggesting any new models. Just wondering what this is based on and why it's being incorporated? There's a discussion in the ruling about doubts re linearity non threshold models, and I'm curious about it's origin and why it's included in a ruling that seems to be mostly about transparency and open data? And what this would mean for the way EPA evaluates an performs risk assessments?

Thanks. Susanne

---

**From:** Block, Molly <[block.molly@epa.gov](mailto:block.molly@epa.gov)>  
**Sent:** Wednesday, November 7, 2018 11:58 AM  
**To:** Rust, Susanne  
**Cc:** Press  
**Subject:** RE: Strengthening Transparency in Regulatory Science/ Media request

Susanne –

Do you have specific questions? Or are you interested in any specific models? The transparency rule does not ask for the public to suggest or otherwise comment on “new models to evaluate risk assessment.”

I’m happy to help, just trying to figure out the best way to answer your inquiry.

Molly

Begin forwarded message:

**From:** "Rust, Susanne" <[susanne.rust@latimes.com](mailto:susanne.rust@latimes.com)>  
**Date:** November 7, 2018 at 8:37:03 AM EST  
**To:** "[daguillard.robert@epa.gov](mailto:daguillard.robert@epa.gov)" <[daguillard.robert@epa.gov](mailto:daguillard.robert@epa.gov)>  
**Subject:** Strengthening Transparency in Regulatory Science/ Media request

Dear Mr. Daguillard,

I am working on a story about the "Strengthening Transparency in Regulatory Science" proposal and I am hoping I can get some information and maybe a comment?

I am particularly interested in the proposed rule's request for new models to evaluate risk assessment.

Any chance you can talk today? Or can you put me in touch with someone who can tell me how this came about and why? My deadline is tomorrow at noon.

Thank you.

Susanne Rust

Reporter, Los Angeles Times

650-804-6790

Message

---

**From:** Dunlap, David [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=591EB15A268249DDA0C05A7451F765C3-DUNLAP, DAV]  
**Sent:** 6/3/2019 3:03:10 PM  
**To:** Hubbard, Carolyn [Hubbard.Carolyn@epa.gov]  
**Subject:** RE: Scientific Integrity INVITE AND UPDATED LIST  
**Attachments:** Copy of Copy of Master Stakeholder List MAY 2019 FTGEdits alpha by org.xlsx

Carolyn,

**Ex. 5 Deliberative Process (DP)**

**Ex. 5 Deliberative Process (DP)**

Thanks

DDD

David D. Dunlap

O – Ex. 6 Personal Privacy (PP)

---

**From:** Hubbard, Carolyn  
**Sent:** Monday, June 3, 2019 10:00 AM  
**To:** Dunlap, David <dunlap.david@epa.gov>; Blackburn, Elizabeth <Blackburn.Elizabeth@epa.gov>; Rodan, Bruce <rodan.bruce@epa.gov>; Orme-Zavaleta, Jennifer <Orme-Zavaleta.Jennifer@epa.gov>  
**Subject:** FW: Scientific Integrity INVITE AND UPDATED LIST

Carolyn Hubbard  
Communications Director  
EPA Office of Research and Development  
202-564-2189

Ex. 6 Personal Privacy (PP)

---

**From:** Grifo, Francesca  
**Sent:** Wednesday, May 29, 2019 2:35 PM  
**To:** Grantham, Nancy <Grantham.Nancy@epa.gov>; Otto, Martha <Otto.Martha@epa.gov>; Sauerhage, Maggie <Sauerhage.Maggie@epa.gov>  
**Cc:** Gibbons, Dayna <Gibbons.Dayna@epa.gov>; Hubbard, Carolyn <Hubbard.Carolyn@epa.gov>; Cogliano, Vincent <cogliano.vincent@epa.gov>; Fitzpatrick, Kacey <Fitzpatrick.Kacey@epa.gov>  
**Subject:** INVITE AND UPDATED LIST

Hi all – Sorry for the delay! Here is the final list of invitees and final invitation. There are still blanks. If no one has names for these suggested organizations, we can either send the 286 invites and wait for the last 65 or wait for that last 65 before sending or drop the 65.

Nancy – if you all would rather send this out – we are ok with that. Our plan is that as soon as you all approve, we would send these names bcc in an email out to this list with the invite in the body.

Thanks and let me know if you have questions or concerns.

Best,  
Francesca

---

**From:** Grantham, Nancy  
**Sent:** Wednesday, May 29, 2019 12:53 PM  
**To:** Scott-Forte, Londa <[Scott-Forte.Londa@epa.gov](mailto:Scott-Forte.Londa@epa.gov)>; Otto, Martha <[Otto.Martha@epa.gov](mailto:Otto.Martha@epa.gov)>; Sauerhage, Maggie <[Sauerhage.Maggie@epa.gov](mailto:Sauerhage.Maggie@epa.gov)>; Grifo, Francesca <[Grifo.Francesca@epa.gov](mailto:Grifo.Francesca@epa.gov)>  
**Cc:** Ryan, Jini <[Ryan.Jini@epa.gov](mailto:Ryan.Jini@epa.gov)>; Gibbons, Dayna <[Gibbons.Dayna@epa.gov](mailto:Gibbons.Dayna@epa.gov)>; Hubbard, Carolyn <[Hubbard.Carolyn@epa.gov](mailto:Hubbard.Carolyn@epa.gov)>; Cogliano, Vincent <[cogliano.vincent@epa.gov](mailto:cogliano.vincent@epa.gov)>; Fitzpatrick, Kacey <[Fitzpatrick.Kacey@epa.gov](mailto:Fitzpatrick.Kacey@epa.gov)>  
**Subject:** RE: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official

Good to go thanks

---

**From:** Scott-Forte, Londa  
**Sent:** Wednesday, May 29, 2019 12:37 PM  
**To:** Otto, Martha <[Otto.Martha@epa.gov](mailto:Otto.Martha@epa.gov)>; Sauerhage, Maggie <[Sauerhage.Maggie@epa.gov](mailto:Sauerhage.Maggie@epa.gov)>; Grifo, Francesca <[Grifo.Francesca@epa.gov](mailto:Grifo.Francesca@epa.gov)>  
**Cc:** Ryan, Jini <[Ryan.Jini@epa.gov](mailto:Ryan.Jini@epa.gov)>; Gibbons, Dayna <[Gibbons.Dayna@epa.gov](mailto:Gibbons.Dayna@epa.gov)>; Hubbard, Carolyn <[Hubbard.Carolyn@epa.gov](mailto:Hubbard.Carolyn@epa.gov)>; Grantham, Nancy <[Grantham.Nancy@epa.gov](mailto:Grantham.Nancy@epa.gov)>; Cogliano, Vincent <[cogliano.vincent@epa.gov](mailto:cogliano.vincent@epa.gov)>; Fitzpatrick, Kacey <[Fitzpatrick.Kacey@epa.gov](mailto:Fitzpatrick.Kacey@epa.gov)>  
**Subject:** Re: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official

Attached is the revised banner and elevator sign with the requested edits.

Thanks!

londa

---

**LONDA SCOTT FORTE**  
Visual Information Specialist

U.S. EPA  
Office of Multimedia  
Office of Public Affairs  
6318 William Jefferson Clinton Building North (WJC Bldg North)  
Washington, DC 20460  
202.564.1504 (office phone)

[intranet.epa.gov/media](http://intranet.epa.gov/media)

**From:** Otto, Martha

**Sent:** Wednesday, May 29, 2019 12:27:12 PM

**To:** Scott-Forte, Londa; Sauerhage, Maggie; Grifo, Francesca

**Cc:** Ryan, Jini; Gibbons, Dayna; Hubbard, Carolyn; Grantham, Nancy; Cogliano, Vincent; Fitzpatrick, Kacey

**Subject:** RE: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official

Hi, Londa,

Thank you, again, for your help with these!

Please make the following edits:

1. For the elevator sign, right now, the URL for more information is listed twice. Please delete the first instance of the URL. Then, reword the next phrase to say "To participate via Adobe Connect or by telephone, please visit: <https://intranet.ord.epa.gov/scientific-integrity/annual-conversation>" You can then center the phrase in the space it's occupying.
2. For the banner, please use the same phrase -- "To participate via Adobe Connect or by telephone, please visit: <https://intranet.ord.epa.gov/scientific-integrity/annual-conversation>"

Please let me know if you have any questions.

We appreciate your help.

Martha

Martha Otto

Office of the Science Advisor

mail code 8105R

tel: 202.564.2782

[otto.martha@epa.gov](mailto:otto.martha@epa.gov)

---

**From:** Scott-Forte, Londa

**Sent:** Wednesday, May 29, 2019 7:51 AM

**To:** Sauerhage, Maggie <[Sauerhage.Maggie@epa.gov](mailto:Sauerhage.Maggie@epa.gov)>

**Cc:** Ryan, Jini <[Ryan.Jini@epa.gov](mailto:Ryan.Jini@epa.gov)>; Gibbons, Dayna <[Gibbons.Dayna@epa.gov](mailto:Gibbons.Dayna@epa.gov)>; Otto, Martha <[Otto.Martha@epa.gov](mailto:Otto.Martha@epa.gov)>;

Hubbard, Carolyn <[Hubbard.Carolyn@epa.gov](mailto:Hubbard.Carolyn@epa.gov)>

**Subject:** Re: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official

Attached is the updated elevator sign and web graphic using the Adobe Connect url.

Thanks!

londa

---

**LONDA SCOTT FORTE**

Visual Information Specialist

U.S. EPA

Office of Multimedia

Office of Public Affairs

6318 William Jefferson Clinton Building North (WJC Bldg North)

Washington, DC 20460

202.564.1504 (office phone)

[intranet.epa.gov/media](http://intranet.epa.gov/media)

---

**From:** Sauerhage, Maggie**Sent:** Tuesday, May 28, 2019 3:09:48 PM**To:** Scott-Forte, Londa**Cc:** Ryan, Jini; Gibbons, Dayna; Otto, Martha; Hubbard, Carolyn**Subject:** RE: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official

Hi Londa – sorry, can we add update the tombstones + the banner for This Week@EPA to both say this before the link that's already included in both:

**To participate remotely via Adobe Connect, please visit:** <https://intranet.ord.epa.gov/scientific-integrity/annual-conversation>

Maggie Sauerhage

Office of Public Affairs

U.S. Environmental Protection Agency

Office: (202) 564-0443

Cell: Ex. 6 Personal Privacy (PP)

---

**From:** Scott-Forte, Londa**Sent:** Tuesday, May 28, 2019 1:26 PM**To:** Ryan, Jini <[Ryan.Jini@epa.gov](mailto:Ryan.Jini@epa.gov)>; Otto, Martha <[Otto.Martha@epa.gov](mailto:Otto.Martha@epa.gov)>**Cc:** Sauerhage, Maggie <[Sauerhage.Maggie@epa.gov](mailto:Sauerhage.Maggie@epa.gov)>; Hubbard, Carolyn <[Hubbard.Carolyn@epa.gov](mailto:Hubbard.Carolyn@epa.gov)>; Grifo, Francesca <[Grifo.Francesca@epa.gov](mailto:Grifo.Francesca@epa.gov)>; Fitzpatrick, Kacey <[Fitzpatrick.Kacey@epa.gov](mailto:Fitzpatrick.Kacey@epa.gov)>; Cogliano, Vincent <[cogliano.vincent@epa.gov](mailto:cogliano.vincent@epa.gov)>; Grantham, Nancy <[Grantham.Nancy@epa.gov](mailto:Grantham.Nancy@epa.gov)>**Subject:** Re: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official

Hi All,

Attached is the updated version of the Scientific Integrity elevator poster. Like Jini said, if you can add the InDesign file to OneDrive, then I can make the edit to the banner today.

Thanks!

Londa

---

**LONDA SCOTT FORTE**

Visual Information Specialist

U.S. EPA

Office of Multimedia

Office of Public Affairs

6318 William Jefferson Clinton Building North (WJC Bldg North)

Washington, DC 20460

202.564.1504 (office phone)

[intranet.epa.gov/media](http://intranet.epa.gov/media)

---

**From:** Ryan, Jini

**Sent:** Tuesday, May 28, 2019 12:52:28 PM

**To:** Otto, Martha

**Cc:** Scott-Forte, Londa; Sauerhage, Maggie; Hubbard, Carolyn; Grifo, Francesca; Fitzpatrick, Kacey; Cogliano, Vincent; Grantham, Nancy

**Subject:** Re: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official

Can you please send the In Design file to us through OneDrive? Thanks.

Jini Ryan

Office of Multimedia

Director/Executive Video Producer

202-564-0175 (work)

Ex. 6 Personal Privacy (PP) (cell)

Sent from my iPhone

> On May 28, 2019, at 12:37 PM, Otto, Martha <[Otto.Martha@epa.gov](mailto:Otto.Martha@epa.gov)> wrote:

>

> Hi, Londa,

>

> Thank you, again, for drafting the update of the poster for the Annual Employee Conversation with the Scientific Integrity Official. My only comment on it is to request that you remove the line:

>



> epawebconferencing.acms.com/scientific-integrity  
>  
> You can then even out the spacing where it was.  
>  
> Regarding the banner: could you please update the banner, as well? I have attached a jpg file. I have an InDesign file, but it's too large to send via email. How can I get that to you? When you update the banner, it should have the same room, date, time, website as the poster.  
>  
> Thank you for your help with this. Please let me know if you have any questions...and how I can get the banner file to you.  
>  
> Martha  
>  
> Martha Otto  
> Office of the Science Advisor  
> mail code 8105R  
> tel: 202.564.2782  
> otto.martha@epa.gov<<mailto:otto.martha@epa.gov>>  
>  
> From: Scott-Forte, Londa  
> Sent: Tuesday, May 21, 2019 9:49 AM  
> To: Ryan, Jini <[Ryan.Jini@epa.gov](mailto:Ryan.Jini@epa.gov)>; Sauerhage, Maggie <[Sauerhage.Maggie@epa.gov](mailto:Sauerhage.Maggie@epa.gov)>  
> Cc: Otto, Martha <[Otto.Martha@epa.gov](mailto:Otto.Martha@epa.gov)>; Hubbard, Carolyn <[Hubbard.Carolyn@epa.gov](mailto:Hubbard.Carolyn@epa.gov)>; Grifo, Francesca <[Grifo.Francesca@epa.gov](mailto:Grifo.Francesca@epa.gov)>; Fitzpatrick, Kacey <[Fitzpatrick.Kacey@epa.gov](mailto:Fitzpatrick.Kacey@epa.gov)>; Cogliano, Gerain <[Cogliano.Gerain@epa.gov](mailto:Cogliano.Gerain@epa.gov)>; Grantham, Nancy <[Grantham.Nancy@epa.gov](mailto:Grantham.Nancy@epa.gov)>  
> Subject: Re: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official  
>  
>  
> Attached is the updated 2018 poster with the new date/time for 2019. The new tombstone size is 20"x55"  
>  
> Please let me know of any changes/corrections.  
>  
>  
>  
> Thanks!  
>  
> londa  
>  
>  
>  
>  

---

  
> LONDA SCOTT FORTE  
> Visual Information Specialist  
> U.S. EPA  
> Office of Multimedia  
> Office of Public Affairs  
> 6318 William Jefferson Clinton Building North (WJC Bldg North)  
> Washington, DC 20460  
> 202.564.1504 (office phone)  
>  
> intranet.epa.gov/media  
>

> \_\_\_\_\_  
> From: Ryan, Jini  
> Sent: Monday, May 20, 2019 5:06:28 PM  
> To: Sauerhage, Maggie  
> Cc: Otto, Martha; Scott-Forte, Londa; Hubbard, Carolyn; Grifo, Francesca; Fitzpatrick, Kacey; Cogliano, Gerain; Grantham, Nancy  
> Subject: Re: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official  
>  
> We'll take a look tomorrow. Thanks.  
>  
>  
>  
> Jini Ryan  
> Office of Multimedia  
> Director/Executive Video Producer  
> 202-564-0175 (work)  
> Ex. 6 Personal Privacy (PP) (cell)  
>  
> Sent from my iPhone  
>  
>> On May 20, 2019, at 4:36 PM, Sauerhage, Maggie  
>> [Sauerhage.Maggie@epa.gov](mailto:Sauerhage.Maggie@epa.gov)<mailto:Sauerhage.Maggie@epa.gov>> wrote:  
>>  
>> Thanks Marti – adding Londa and Jini. Londa will be able to update these signs for you.  
>>  
>> Londa – please see Marty's request below for help in updating these signs for an internal-EPA event on June 6th. Is this something you can help with? Thank you!  
>>  
>> From Marti:  
>> Regarding outreach for the Annual Employee Conversation with the Scientific Integrity Official, we had mentioned that we have last year's banner and tombstone designs, which were created using InDesign. You offered to update them for us.  
>>  
>> I have attached the InDesign file for the tombstone and a pdf copy of the tombstone. I cannot open the InDesign file. I'm hoping that the pdf matches what's in the InDesign file. The only information that is changing on the tombstone is that the meeting will be on Thursday, June 6th, from 1 to 3 pm EDT. Same room as last year. I have not yet verified that we are going to use the same Adobe Connect room as last year, but it's a good guess that we will.  
>>  
>> Unfortunately, the InDesign file for the banner is too big to send via email. How can I get that to you? I did attach a jpg file of the banner, so that you can see what it looks like. We have not yet updated the intranet website that is listed in the banner, but we will use the same website.  
>>  
>> Please let me know if you have any questions – and, also how to get the banner InDesign file to you.  
>>  
>>  
>> Maggie Sauerhage  
>> Office of Public Affairs  
>> U.S. Environmental Protection Agency  
>> Office: (202) 564-0443  
>> Cell: Ex. 6 Personal Privacy (PP)  
>>  
>> From: Otto, Martha

>> Sent: Monday, May 20, 2019 4:33 PM

>> To: Sauerhage, Maggie <[Sauerhage.Maggie@epa.gov](mailto:Sauerhage.Maggie@epa.gov)<mailto:Sauerhage.Maggie@epa.gov>>

>> Cc: Hubbard, Carolyn <[Hubbard.Carolyn@epa.gov](mailto:Hubbard.Carolyn@epa.gov)<mailto:Hubbard.Carolyn@epa.gov>>; Fitzpatrick, Kacey <[Fitzpatrick.Kacey@epa.gov](mailto:Fitzpatrick.Kacey@epa.gov)<mailto:Fitzpatrick.Kacey@epa.gov>>; Grifo, Francesca <[Grifo.Francesca@epa.gov](mailto:Grifo.Francesca@epa.gov)<mailto:Grifo.Francesca@epa.gov>>; Cogliano, Vincent <[cogliano.vincent@epa.gov](mailto:cogliano.vincent@epa.gov)<mailto:cogliano.vincent@epa.gov>>

>> Subject: request for help with updating outreach materials (created in InDesign) for Annual Employee Conversation with the Scientific Integrity Official

>>

>> Hi, Maggie,

>>

>> Thank you, again, for meeting with us last week about our upcoming events (the Annual Employee Conversation with the Scientific Integrity Official (on June 6th) and the Annual Scientific Integrity Stakeholder meeting (on June 20th)). We really appreciate your help!

>>

>> Regarding outreach for the Annual Employee Conversation with the Scientific Integrity Official, we had mentioned that we have last year's banner and tombstone designs, which were created using InDesign. You offered to update them for us.

>>

>> I have attached the InDesign file for the tombstone and a pdf copy of the tombstone. I cannot open the InDesign file. I'm hoping that the pdf matches what's in the InDesign file. The only information that is changing on the tombstone is that the meeting will be on Thursday, June 6th, from 1 to 3 pm EDT. Same room as last year. I have not yet verified that we are going to use the same Adobe Connect room as last year, but it's a good guess that we will.

>>

>> Unfortunately, the InDesign file for the banner is too big to send via email. How can I get that to you? I did attach a jpg file of the banner, so that you can see what it looks like. We have not yet updated the intranet website that is listed in the banner, but we will use the same website.

>>

>> Please let me know if you have any questions – and, also how to get the banner InDesign file to you.

>> Thank you for your help!

>>

>> Marti

>>

>> Martha Otto

>> Office of the Science Advisor

>> mail code 8105R

>> tel: 202.564.2782

>> [otto.martha@epa.gov](mailto:otto.martha@epa.gov)<<mailto:otto.martha@epa.gov>>

>>

>>

>> <Final 2018 Tombstone.indd>

>> <Final 2018 Tombstone.pdf>

>> <Final 2018 Banner 5-16-18.jpg>

> <Final 2018 Banner 5-16-18.jpg>

> <2019Science\_Integrity-20x55-1.pdf>

Organization	Contact	Title	Email	RSVP	Date Invite Sent
Afton Chemical Corporation	Athena Keene		<a href="mailto:athenak13@yahoo.com">athenak13@yahoo.com</a>		
American Association for the Advancement of Science (AAAS)	Joanne Padron Carney		<a href="mailto:icarney@aaas.org">icarney@aaas.org</a>		
American Association for the Advancement of Science (AAAS)	Kei Koizumi		<a href="mailto:kkoizumi@aaas.org">kkoizumi@aaas.org</a>		
American Association of Petroleum Geologists					
American Beverage Association	Maia Jack		<a href="mailto:Mjack@ameribev.org">Mjack@ameribev.org</a>		
American Chemical Society	Ray Gavent		<a href="mailto:cei@acs.org">cei@acs.org</a>		
American Chemical Society	Anthony Pitagno		<a href="mailto:a_pitagno@acs.org">a_pitagno@acs.org</a>		
American Chemical Society	Brandi Neifert		<a href="mailto:b_neifert@acs.org">b_neifert@acs.org</a>		
American Chemical Society	Caroline Trupp Gil		<a href="mailto:c_TruppGil@acs.org">c_TruppGil@acs.org</a>		
American Chemical Society Green Chemical Institute					
American Chemistry Council	Rick Becker		<a href="mailto:Rick_Becker@americanchemistry.com">Rick_Becker@americanchemistry.com</a>		
American Chemistry Council	Laura Brust		<a href="mailto:laura_brust@americanchemistry.com">laura_brust@americanchemistry.com</a>		
American Chemistry Council	David Fischer		<a href="mailto:david_fischer@americanchemistry.com">david_fischer@americanchemistry.com</a>		
American Chemistry Council	Kimberly White		<a href="mailto:Kimberly_White@americanchemistry.com">Kimberly_White@americanchemistry.com</a>		
American Chemistry Council	Neeraja Erraguntla		<a href="mailto:Neeraja_Erraguntla@americanchemistry.com">Neeraja_Erraguntla@americanchemistry.com</a>		
American Chemistry Council	Devon Harman		<a href="mailto:devon_harman@americanchemistry.com">devon_harman@americanchemistry.com</a>		
American Chemistry Council	Brenda Barry				

Year Attended Previously	Notes	ID#
2015		
2015		
	(forwarded invite)	
	(forwarded invite)	
2015		
2015		
2015		
2016		
2016		
	(forwarded invite)	
2015	email bounced back	

no longer at ACC

American Chemistry Council	Has Shah	
American Cleaning Institute		
American Composites Manufacturer's Association (ACMA)	John Schweitzer	<a href="mailto:jschweitzer@acmanet.org">jschweitzer@acmanet.org</a>
American Council on Science and Health	Hank Campbell	<a href="mailto:hank@acsh.org">hank@acsh.org</a>
American Enterprise Institute (AEI)	Ben Zycher	<a href="mailto:Benjamin.Zycher@AEI.org">Benjamin.Zycher@AEI.org</a>
American Federation of Labor and Congress of Industrial Organizations	Peg Seminario	<a href="mailto:pseminar@afcio.org">pseminar@afcio.org</a>
American Forest and Paper Association	Stewart Holm	<a href="mailto:stewart_holm@afandpa.org">stewart_holm@afandpa.org</a>
American Gas Association	Pam Lacey	<a href="mailto:placey@aga.org">placey@aga.org</a>
American Geophysical Union	Carissa Bunge	<a href="mailto:cbunge@agu.org">cbunge@agu.org</a>
American Geophysical Union	Alexandra Shultz	<a href="mailto:ashultz@agu.org">ashultz@agu.org</a>
American Geophysical Union	Tamara Dickinson	<a href="mailto:tdickinson@agu.org">tdickinson@agu.org</a>
American Geophysical Union	Timia Crisp	<a href="mailto:tcrisp@agu.org">tcrisp@agu.org</a>
American Heart Association		
American Institute of Biological Sciences	Robert Gropp	<a href="mailto:rgropp@aibs.org">rgropp@aibs.org</a>
American Lung Association	Paul Billings	<a href="mailto:paul.billings@lung.org">paul.billings@lung.org</a>
American Lung Association	Janice Nolen	<a href="mailto:Janice.nolen@lung.org">Janice.nolen@lung.org</a>
American Meteorological Society	Keith Seitter	<a href="mailto:kseitter@ametsoc.org">kseitter@ametsoc.org</a>
American Petroleum Institute	Patrick Beatty	<a href="mailto:beattyp@api.org">beattyp@api.org</a>
American Petroleum Institute	Uni Blake	<a href="mailto:blakeu@api.org">blakeu@api.org</a>
American Petroleum Institute	Russell White	<a href="mailto:whiter@api.org">whiter@api.org</a>
American Physical Society	Francis Slakey	<a href="mailto:slakey@aps.org">slakey@aps.org</a>

2015	unable to find contact info
2015	
-	
-	
-	
Retired	

also include Paul Noe - paul\_noe@afandpa.org

American Public Health Association	Donald Hoppert	<a href="mailto:donald.hoppert@apha.org">donald.hoppert@apha.org</a>
American Water Works Association	G. Tracy Mehan, III	<a href="mailto:tmehan@awwa.org">tmehan@awwa.org</a>
American Water Works Association	Alan Roberson	<a href="mailto:aroberson@awwa.org">aroberson@awwa.org</a>
American Water Works Association	Smantha Rucinski	<a href="mailto:srucinski@awwa.org">srucinski@awwa.org</a>
American Wood Council	Andrew Dodson	<a href="mailto:adodson@awc.org">adodson@awc.org</a>
Amgen		
Apple		
Appredica		
Arnot Research		
Association of Public Health Laboratories	Julianne Nassif	<a href="mailto:julianne.nassif@aphl.org">julianne.nassif@aphl.org</a>
Association of State and Territorial Health Officials	James Blumenstock	<a href="mailto:jblumenstock@astho.org">jblumenstock@astho.org</a>
Association of State and Territorial Solid Waste Management		
Association of State Drinking water Associations		
Autocare Association		
Basel Action Network		
BASF	Ray David	
Battelle Memorial Institute		
Bayer		
Bioseek		



	would like meeting info forwarded
-	email bounced back
	email bounced back
-	
-	
-	
2015	email bounced back

also include Kevin Morley - kmorley@awwa.org

Bipartisan Policy Center	Daniel D'Arcy	<a href="mailto:ddarcy@bipartisanpolicy.org">ddarcy@bipartisanpolicy.org</a>
Brennan Center for Justice	Martha Kinsella	<a href="mailto:kinsellam@brennan.law.nyu.edu">kinsellam@brennan.law.nyu.edu</a>
Califironia Department of Health		
California Environmental Protection Agency	Lauren Zeise	<a href="mailto:lauren.zeise@oehha.ca.gov">lauren.zeise@oehha.ca.gov</a>
CalRecycle		
Carlin Economics and Science	Alan Carlin	<b>Ex. 6 Personal Privacy (PP)</b>
Cato Institute	Patrick Michaels	<a href="mailto:pmichaels@cato.org">pmichaels@cato.org</a>
Cato Institute	Andrei Illarionov	<a href="mailto:aillarionov@cato.org">aillarionov@cato.org</a>
Center for American Progress	Sharita Gruberg	<a href="mailto:sgruberg@americanprogress.org">sgruberg@americanprogress.org</a>
Center for Biological Diversity	Noah Greenwald	<a href="mailto:ngreenwald@biologicaldiversity.org">ngreenwald@biologicaldiversity.org</a>
Center for Energy Competitiveness	David Stevenson	<b>Ex. 6 Personal Privacy (PP)</b>
Center for Open Science		
Center for Progressive Reform	Matthew Shudtz	<a href="mailto:mshudtz@progressivereform.org">mshudtz@progressivereform.org</a>
Center for Science in the Public Interest	Lisa Lefferts	<a href="mailto:lleferts@cspinet.org">lleferts@cspinet.org</a>
Chemical Industries Association		
Chemtura (Now Lanxess)	Max Taytelbaum	
Chesapeake Energy Corporation		
Chevron		
Children's Environmental Health Network		
Citizens for Responsibility and Ethics in Washington	Anne Weissmann	<a href="mailto:Aweissmann@citizensforethics.org">Aweissmann@citizensforethics.org</a>
Climate Physics LLC	Edwin Berry	<a href="mailto:ed@edberry.com">ed@edberry.com</a>

	in-person
2015	<div>Ex. 6 Personal Privacy (PP)</div> <div>called but no response</div>

Climate Science Legal Defense Fund	Lauren Kurtz	<a href="mailto:lkurtz@csldf.org">lkurtz@csldf.org</a>
Committee For A Constructive Tomorrow	Paul Driessen	<b>Ex. 6 Personal Privacy (PP)</b>
Competitive Enterprise Institute	Myron Ebell	<a href="mailto:mebell@cei.org">mebell@cei.org</a>
Conrad Law and Policy Counsell	Jamie Conrad	<a href="mailto:jamie@conradcounsel.com">jamie@conradcounsel.com</a>
Council of Producers and Distributors of Agrotechnology	Mike White	
Council Producers and Distributors of Ag	Sue Ferenc	<a href="mailto:sferenc@cpda.com">sferenc@cpda.com</a>
CropLife America	Janet E. Collins	<a href="mailto:jcollins@croplifeamerica.org">jcollins@croplifeamerica.org</a>
CropLife America	Reshma Arrington	<a href="mailto:rarrington@croplifeamerica.org">rarrington@croplifeamerica.org</a>
D.C. Department of energy and Environment		
Demos	Tamara Draut	<a href="mailto:tdraut@demos.org">tdraut@demos.org</a>
Dow Corning	Paul Jean	<a href="mailto:paul.a.jean@dowcorning.com">paul.a.jean@dowcorning.com</a>
Dow Corning	Elke Jensen	<a href="mailto:elke.jensen@dowcorning.com">elke.jensen@dowcorning.com</a>
Dow Corning	Kathy Plotzke	<a href="mailto:kathy.plotzke@dowcorning.com">kathy.plotzke@dowcorning.com</a>
Dow Corning	Shawn Seidel	<a href="mailto:s.seidel@dowcorning.com">s.seidel@dowcorning.com</a>
Dow Corning	Gary Kolesar	
Dow Corning	Debra McNett	
Dupont	Jason Roper	<a href="mailto:jason.ropor-1@dupont.com">jason.ropor-1@dupont.com</a>
Earthjustice	Michelle Mabson	<a href="mailto:mmabson@earthjustice.org">mmabson@earthjustice.org</a>

2015	
2015	email bounced back
2015	
2016	cc: cdemarco @croplifea merica.org
2016	
2015	
2015	
2015	
2015	
2015	No longer with DC
2015	unable to find contact info
2015	

Earthjustice	Tyler Smith	<a href="mailto:tsmith@earthjustice.org">tsmith@earthjustice.org</a>
Earthjustice	Sarah Saylor	<a href="mailto:ssaylor@earthjustice.org">ssaylor@earthjustice.org</a>
Earthjustice	Brielle Green	<a href="mailto:bgreen@earthjustice.org">bgreen@earthjustice.org</a>
Eastman Chemical Company	John Hott	
Edison Electric Institute	Cynthia Trueheart	<a href="mailto:ctrueheart@eei.org">ctrueheart@eei.org</a>
Electric Power Research Institute	Leonard Levin	<a href="mailto:llevin@epri.com">llevin@epri.com</a>
Electric Power Research Institute	Annette Rohr	<a href="mailto:arohr@epri.com">arohr@epri.com</a>
Emeritus University of Connecticut	Howard "Cork" Hayden	<b>Ex. 6 Personal Privacy (PP)</b>
Endocrine Society	Joseph Laakso	<a href="mailto:jlaakso@endocrine.org">jlaakso@endocrine.org</a>
Environment America	Erik Dumont	<a href="mailto:edumont@environmentamerica.org">edumont@environmentamerica.org</a>
Environmental Council of the States	Alexandra Dunn	<a href="mailto:adunn@ecos.org">adunn@ecos.org</a>
Environmental Defense Fund	Lindsay McCormick	<a href="mailto:lmccormick@edf.org">lmccormick@edf.org</a>
Environmental Defense Fund	Richard Denison	<a href="mailto:rdenison@edf.org">rdenison@edf.org</a>
Environmental Integrity Project	Eric Schaeffer	<a href="mailto:eschaeffer@environmentalintegrity.org">eschaeffer@environmentalintegrity.org</a>
Environmental Law and Policy Center		
Environmental Protection Network	Michelle Roos	<a href="mailto:michelle.roos@environmentalprotectionnetwork.org">michelle.roos@environmentalprotectionnetwork.org</a>
Environmental Working Group	Kenneth Cook	<a href="mailto:ken@ewg.org">ken@ewg.org</a>
ExxonMobil	R. Jeffrey Lewis	<a href="mailto:r.jeffrey.lewis@exxonmobil.com">r.jeffrey.lewis@exxonmobil.com</a>
ExxonMobil	Marusia Popovech	<a href="mailto:mary.a.popovech@exxonmobil.com">mary.a.popovech@exxonmobil.com</a>
ExxonMobil	Rebecca Alyea	<a href="mailto:rebecca.a.alysa@exxonmobil.com">rebecca.a.alysa@exxonmobil.com</a>
Farm Worker Association of Florida		

(forwarded invite)	
2015	Ex. 6 Personal Privacy (PP) called but no response
-	
-	
-	
2015	
2015	
2016	

Alex has moved on. Go to website and send to current director

Federation of American Societies for Experimental Biology	Howard Garrison	<a href="mailto:hgarrison@faseb.org">hgarrison@faseb.org</a>
Federation of American Societies for Experimental Biology	Yvette Seger	<a href="mailto:yseger@faseb.org">yseger@faseb.org</a>
Florida Center for Solid and Hazardous Waste Management		
Florida Department of Health		
FMC Corporation	Paul Whatling	<a href="mailto:paul.whatling@fmc.com">paul.whatling@fmc.com</a>
Food and Water Watch	Tony Corbo	<a href="mailto:tcorbo@fwwatch.org">tcorbo@fwwatch.org</a>
GE	Patricia Casano	<a href="mailto:pat.casano@ge.com">pat.casano@ge.com</a>
George Washington University Jacobs Institute for Women's Health	Liz Borkowski	<a href="mailto:borkowsk@gwu.edu">borkowsk@gwu.edu</a>
George Washington University Milken Institute of Public Health	Celeste Monforton	<a href="mailto:cmonfort@gwu.edu">cmonfort@gwu.edu</a>
George Washington University Milken Institute of Public Health	David Michaels	<a href="mailto:dmm@gwu.edu">dmm@gwu.edu</a>
Georgia Pacific		
GlaxoSmithKline		
Global Biodiversity Center (Colorado State University)	Sarah Reed	<a href="mailto:sarah.reed@colostate.edu">sarah.reed@colostate.edu</a>
Global Women's Institute (George Washington University) (Jacobs Institute for Women's Health)	Susan Wood	<a href="mailto:sfwood@gwu.edu">sfwood@gwu.edu</a>
Gordon Fulks and Associates	Gordon Fulks	<b>Ex. 6 Personal Privacy (PP)</b>
Government Accountability Project	Dana Gold	<a href="mailto:danag@whistleblower.org">danag@whistleblower.org</a>





Government Accountability Project	Ahna Van Valkenburg	<a href="mailto:ahnav@whistleblower.org">ahnav@whistleblower.org</a>
Government Accountability Project	Samantha Feinstein	<a href="mailto:samanthaf@whistleblower.org">samanthaf@whistleblower.org</a>
Government Accountability Project	Anne Polansky	<b>Ex. 6 Personal Privacy (PP)</b>
Government Information Watch	Patrice McDermott	<a href="mailto:pmcdermott@govinfowatch.net">pmcdermott@govinfowatch.net</a>
Green Electrics Council		
Greenpeace USA	Tim Donaghy	<b>Ex. 6 Personal Privacy (PP)</b>
Health Effects Institute	Robert O'Keefe	<a href="mailto:rokeefe@healtheffects.org">rokeefe@healtheffects.org</a>
Health Effects Institute	Daniel Greenbaum	<a href="mailto:dgreenbaum@healtheffects.org">dgreenbaum@healtheffects.org</a>
Heritage Foundation	Kevin Dayaratna	<a href="mailto:kevin.Dayaratna@heritage.org">kevin.Dayaratna@heritage.org</a>
Hexion	Mark Gruenwald	<a href="mailto:mark.gruenwald@hexion.com">mark.gruenwald@hexion.com</a>
Hoover Institution	Jeremy Christopher Carl	<a href="mailto:carljc@stanford.edu">carljc@stanford.edu</a>
House Staffer, Environment Minority	Pamitha Weerasinghe	
Human Rights Watch	Sarah Saadoun	<a href="mailto:saadous@hrw.org">saadous@hrw.org</a>
ICF	Ami Gordon	<a href="mailto:ami.gordon@icfi.com">ami.gordon@icfi.com</a>
ICF	Jessica Wignall	<a href="mailto:jessica.wignall@icf.com">jessica.wignall@icf.com</a>
Institute of Energy Research (IER)	Tom Pyle	<a href="mailto:tpyle@energydc.org">tpyle@energydc.org</a>
Institute of Scrap Recycling Industries		
International Electronics Manufacturing Initiative		
International Life Science Institute (ILSI)	Michelle R. Embry	<a href="mailto:membr@ilsi.org">membr@ilsi.org</a>
International Society of Environmental Epidemiology		
International Solid Waste Assn.		



Interstate Technology and Regulatory Council		
Investigative Reporters and Editors	Doug Haddix	<a href="mailto:doug@ire.org">doug@ire.org</a>
Jacobs Institute for Women's Health		
	Liz Borkowski	
Johns Hopkins Bloomberg School of Public Health		
	Thomas Burke	<a href="mailto:tburke1@jhu.edu">tburke1@jhu.edu</a>
Johns Hopkins Bloomberg School of Public Health		
	Ellen Silberberg	<a href="mailto:esilber2@jhu.edu">esilber2@jhu.edu</a>
Junkscience.com	Steve Milloy	Ex. 6 Personal Privacy (PP)
Lyondell Basell	Marcy Banton	<a href="mailto:marcy.banton@LYB.com">marcy.banton@LYB.com</a>
Management Information Services, Inc.	Roger Bezdek	<a href="mailto:rbezdek@misi-net.com">rbezdek@misi-net.com</a>
Martin Marietta		
Maryland Department of the Environment		
Merck		
Milken Institute School of Public Health (George Washington University)		
	Lynn Goldman	
Minnesota Department of Health		
	Helen Goeden	<a href="mailto:helen.goeden@health.state.mn.us">helen.goeden@health.state.mn.us</a>
Missouri Department of Natural Resources		
Monsanto	James Nyangulu	<a href="mailto:james.m.nyangulu@monsanto.com">james.m.nyangulu@monsanto.com</a>
Monsanto	Jim Sherman	
Monsanto Company		
	Joel Kronenberg	<a href="mailto:joel.m.kronenberg@monsanto.com">joel.m.kronenberg@monsanto.com</a>
Monsanto Company (?)		
	Jay Petrick	<a href="mailto:jay.s.petrick@monsanto.com">jay.s.petrick@monsanto.com</a>
Naphthalene Council, Inc.		
	Anne LeHuray	<a href="mailto:alehuray@pavementcouncil.org">alehuray@pavementcouncil.org</a>
National Academy of Sciences, Engineering, & Medicine		
	Susan Martel	<a href="mailto:smartel@nas.edu">smartel@nas.edu</a>

-
2015
2015, 2016 email bounced back
2015
2016
2015

Also include Betsy Duncan - [betsy.duncan@lyondellbasell.com](mailto:betsy.duncan@lyondellbasell.com)

National Academy of Sciences, Engineering, & Medicine	Ellen Mantus	<a href="mailto:emantus@nas.edu">emantus@nas.edu</a>
National Association of Clean Air Agencies		
National Association of County and City Health Officials		
National Center for Electronics Recycling		
National Center for Health Research	Diana Zuckerman	<a href="mailto:dz@center4research.org">dz@center4research.org</a>
National Center for Health Research	Jack Mitchell	<a href="mailto:jm@center4research.org">jm@center4research.org</a>
National Center for Health Research	Stephanie Fox- Rawlings	<a href="mailto:sfr@center4research.org">sfr@center4research.org</a>
National Employment Law Project	Debbie Berkowitz	<a href="mailto:dberkowitz@nelp.org">dberkowitz@nelp.org</a>
National Federation of Federal Employees	Steve Lenkart	<a href="mailto:slenkart@nffe.org">slenkart@nffe.org</a>
National Federation of Federal Employees	Hamad Abbas	<a href="mailto:habbas@nffe.org">habbas@nffe.org</a>
National Parks Conservation Association	Ulla Reeves	<a href="mailto:ureeves@npca.org">ureeves@npca.org</a>
National Partnership for Women and Families	Jessi Leigh Swenson	<a href="mailto:jswenson@nationalpartnership.org">jswenson@nationalpartnership.org</a>
National Partnership for Women and Families	Rachel Kuenzi	<a href="mailto:rkuenzi@nationalpartnership.org">rkuenzi@nationalpartnership.org</a>
National Partnership for Women and Families	Shaina Goodman	<a href="mailto:sgoodman@nationalpartnership.org">sgoodman@nationalpartnership.org</a>
National Science Policy Network	Avital Percher	Ex. 6 Personal Privacy (PP)
National Wildlife Federation	Bruce Stein	<a href="mailto:steinb@nwf.org">steinb@nwf.org</a>
Natural Resources Defense Council	Jennifer Sass	<a href="mailto:jsass@nrdc.org">jsass@nrdc.org</a>



Natural Resources Defense Council	Roland Hwang	<a href="mailto:nhwang@nrdc.org">nhwang@nrdc.org</a>
Natural Resources Defense Council	Vijay Limaye	<a href="mailto:vlimaye@nrdc.org">vlimaye@nrdc.org</a>
New Jersey Department of Environmental Protection	Gloria Post	<a href="mailto:gloria.post@dep.nj.gov">gloria.post@dep.nj.gov</a>
New York Department of Environmental Conservation		
New York Department of Health		
North Carolina Department of Environmental Quality		
North Carolina Dept of Agricultural & Consumer Services		
Nuclear Regulatory Committee		
NW Maps Co	Bob Zybach	<a href="mailto:zybachb@nwmapsc.com">zybachb@nwmapsc.com</a>
Oil Spill Recovery Institute		
Olin Corporation	Lynn Pottenger	
Open the Government	Lisa Rosenberg	<a href="mailto:lrosenberg@openthegovernment.org">lrosenberg@openthegovernment.org</a>
Open the Government	Emily Manna	<a href="mailto:emanna@openthegovernment.org">emanna@openthegovernment.org</a>
Open the Government	Patrice McDermott	<a href="mailto:pmcdermott@govinfowatch.net">pmcdermott@govinfowatch.net</a>
Oregon Department of Environmental Quality		
PES Environmental		
Pesticide Action Network		
Pfizer		
Physicians Committee for Responsible Medicine	Nancy Beck	<a href="mailto:nbeck@pcrm.org">nbeck@pcrm.org</a>
Physicians for Social Responsibility		



2015, 2016	called, but unable to get info

Proctor and Gamble	Sean Broderick	<a href="mailto:Broderick.sp@pg.com">Broderick.sp@pg.com</a>
Proctor and Gamble	Susan Felter	<a href="mailto:felter.sp@pg.com">felter.sp@pg.com</a>
Proctor and Gamble	Sharon Stuard	
Program on Climate and Health (George Mason University)		
Project on Government Oversight	Danielle Brian	<a href="mailto:danielle@pogo.org">danielle@pogo.org</a> / <a href="mailto:dbrian@pogo.org">dbrian@pogo.org</a>
Project on Government Oversight	Sean Moulton	<a href="mailto:smoulton@pogo.org">smoulton@pogo.org</a>
Project on Government Oversight	Rebecca "Becca" Jones	<a href="mailto:rjones@pogo.org">rjones@pogo.org</a>
Project on Government Oversight	Laura Peterson	<a href="mailto:lpeterson@pogo.org">lpeterson@pogo.org</a>
Public Citizen	Sidney Wolfe	<a href="mailto:swolfe@citizen.org">swolfe@citizen.org</a>
Public Citizen	Lisa Gilbert	<a href="mailto:lgilbert@citizen.org">lgilbert@citizen.org</a>
Public Citizen	Susan Harley	<a href="mailto:sharley@citizen.org">sharley@citizen.org</a>
Public Citizen	Shanna Devine	<a href="mailto:sdevine@citizen.org">sdevine@citizen.org</a>
Public Employees for Environmental Responsibility	Tim Whitehouse	<a href="mailto:twhitehouse@peer.org">twhitehouse@peer.org</a>
Public Member ACC SST	Larry Reiter	<a href="mailto:lreiter@uthsc.edu">lreiter@uthsc.edu</a>
Regnet Environmental Services	Robert Fensterheim	<a href="mailto:rfensterheim@regnet.com">rfensterheim@regnet.com</a>
Regnet Environmental Services	Robert Fensterheim	<a href="mailto:haylie.choi@regnet.com">haylie.choi@regnet.com</a>
Regulatory Checkbook, Neutral Science	Richard Belzer	<a href="mailto:rbbelzer@post.harvard.edu">rbbelzer@post.harvard.edu</a>

2015	
	unable to find contact info
2015	unable to find contact info
2015	
2015	
	unable to find contact info
	in-person

include Julie Froelicher - froelicher.jm@pg.com

Reporters Committee for Freedom of the Press	Gregg Leslie	<a href="mailto:gleslie@rcfp.org">gleslie@rcfp.org</a>	
Resources for the Future	Margaret Walls	<a href="mailto:walls@rff.org">walls@rff.org</a>	
Retired DOE	Ronald Sundelin	<b>Ex. 6 Personal Privacy (PP)</b>	
Retired NASA	Hal Doiron		
Retired NASA	Ferenc Miskolczi		
Safer Chemicals Healthy Families			
Schnare Law	David Schnare		
Science and Environmental Policy Project	Kenneth Haapala	<a href="mailto:ken@sepp.org">ken@sepp.org</a>	
Shell Oil Company	Stuart Cagen	<a href="mailto:stuart.cagen@shell.com">stuart.cagen@shell.com</a>	
Sierra Club	Liz Perera	<a href="mailto:liz.perera@sierraclub.org">liz.perera@sierraclub.org</a>	
Silent Spring Institute			
Society for Conservation Biology	Heather DeCaluwe	<a href="mailto:hdecaluwe@conbio.org">hdecaluwe@conbio.org</a>	
Society of Chemical Manufacturers and Affiliates			
Society of Environmental Journalists	Joe Davis	<b>Ex. 6 Personal Privacy (PP)</b> <a href="mailto:jdavis@sej.org">jdavis@sej.org</a>	
Society of Environmental Toxicology and Chemistry			
Society of Professional Journalists	Kathryn Foxhall	<a href="mailto:kfoxhall@verizon.net">kfoxhall@verizon.net</a>	
Society of Professional Journalists	Jennifer Royer	<a href="mailto:jroyer@hq.spj.org">jroyer@hq.spj.org</a>	
Solid Waste Association of North America			
Spark of Freedom Foundation	James Taylor	<b>Ex. 6 Personal Privacy (PP)</b>	
Sumitomo	Yoshi Deguchi		

	in-person
2015	
2015	Ex. 6 Personal Privacy (PP)
	called but no response

Dan Newton - newtond@socma.com - But we should also send to their relatively new CEO.

Scott Davis - sdavis@sesmi.com

Summit Tox	Lesa Aylward	<a href="mailto:laylward@summittoxicology.com">laylward@summittoxicology.com</a>
Sunlight Foundation	Rachel Bergman	<a href="mailto:rbergman@sunlightfoundation.com">rbergman@sunlightfoundation.com</a>
Syngenta		
Texas Commission on Environmental Quality	Michael Honeycutt	<a href="mailto:michael.honeycutt@tecq.texas.gov">michael.honeycutt@tecq.texas.gov</a>
The Dow Chemical Company	Katie Coady	<a href="mailto:kcoady@dow.com">kcoady@dow.com</a>
The Dow Chemical Company	Sue Marty	
The Dow Chemical Company	Joanna Klapacz	
The Dow Chemical Company	Craig Rowlands	
The Heartland Institute	Veronica Harrison	<a href="mailto:vharrison@heartland.org">vharrison@heartland.org</a>
The Heartland Institute	Jim Lakely	<a href="mailto:jlakely@heartland.org">jlakely@heartland.org</a>
The Heartland Institute	Joseph Bast	<a href="mailto:jbast@heartland.org">jbast@heartland.org</a>
The Heartland Institute	Aaron Stover	<a href="mailto:astover@heartland.org">astover@heartland.org</a>
The Heartland Institute	H. Sterling Burnett	<a href="mailto:hburnett@heartland.org">hburnett@heartland.org</a>
The Heartland Institute	Norman Rogers	<b>Ex. 6 Personal Privacy (PP)</b>
The Johns Hopkins University	Martin Stephens	<a href="mailto:msteph14@jhu.edu">msteph14@jhu.edu</a>
The Medical Society Consortium on Climate & Health		
Thermo Fisher Scientific, Inc.		
Toxics Use Reduction Institute		
Trust for America's Health		
Unilever		
Union of Concerned Scientists	Michael Halpern	<a href="mailto:mhalpern@ucsusa.org">mhalpern@ucsusa.org</a>
Union of Concerned Scientists	Jacob Carter	<a href="mailto:jcarter@ucsusa.org">jcarter@ucsusa.org</a>
Union of Concerned Scientists	Gretchen Goldman	<a href="mailto:ggoldman@ucsusa.org">ggoldman@ucsusa.org</a>
<a href="mailto:UAWdsivin@uaw.net">UAWdsivin@uaw.net</a>	Darius Sivin	

2015	
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2015	unable to find contact info
2015	email bounced back
	in-person
2015	

University of Hartford	Laurence Gould	<a href="mailto:lgould@hartford.edu">lgould@hartford.edu</a>
University of Missouri	Anthony Lupo	<a href="mailto:lupoa@missouri.edu">lupoa@missouri.edu</a>
US Naval Academy	Mark Campbell	<a href="mailto:campbell@usna.edu">campbell@usna.edu</a>
Virginia Department of Environmental Quality		
Virginia Department of Mines, Minerals, and Energy		
Washington State Department of Ecology		
Water Environment and Reuse Foundation		
Water Environment Federation		
Water Environment Research Foundation		
Water Quality Assn.		
Wisconsin Public Radio	Steve Paulson	<a href="mailto:paulson@wpr.org">paulson@wpr.org</a>
World Resources Institute	Janet Ranganathan	<a href="mailto:janetr@wri.org">janetr@wri.org</a>

Lynn Bergeson - [lbergeson@lawbc.com](mailto:lbergeson@lawbc.com)

Joe Green - [JGreen@KelleyDrye.com](mailto:JGreen@KelleyDrye.com)

Ross Eisenberg - [reisenberg@nam.org](mailto:reisenberg@nam.org)





Message

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**From:** Dunlap, David [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=591EB15A268249DDA0C05A7451F765C3-DUNLAP, DAV]  
**Sent:** 6/17/2019 7:13:09 PM  
**To:** Brazauskas, Joseph [brazauskas.joseph@epa.gov]; Voyles, Travis [Voyles.Travis@epa.gov]  
**CC:** Fitzmorris, Amanda [fitzmorris.amanda@epa.gov]  
**Subject:** Fwd: Congressman Tonko at Scientific Integrity Meeting  
**Attachments:** Copy of 6.17\_Stakeholder\_RSVP\_List ONLY IN PERSON RSVPs.xlsx; ATT00001.htm; Draft Agenda Stakeholder Meeting 2019.edited.docx; ATT00002.htm

**Ex. 5 Deliberative Process (DP)**

Sent from my iPhone

Begin forwarded message:

**From:** "Grantham, Nancy" <Grantham.Nancy@epa.gov>  
**Date:** June 17, 2019 at 3:06:24 PM EDT  
**To:** "Orme-Zavaleta, Jennifer" <Orme-Zavaleta.Jennifer@epa.gov>, "Dunlap, David" <dunlap.david@epa.gov>  
**Subject:** FW: Congressman Tonko at Scientific Integrity Meeting

Making sure you have this thanks ng

---

**From:** Sauerhage, Maggie  
**Sent:** Monday, June 17, 2019 1:18 PM  
**To:** Richardson, RobinH <Richardson.RobinH@epa.gov>; Grantham, Nancy <Grantham.Nancy@epa.gov>; Linkins, Samantha <Linkins.Samantha@epa.gov>  
**Cc:** Fitzpatrick, Kacey <Fitzpatrick.Kacey@epa.gov>  
**Subject:** Congressman Tonko at Scientific Integrity Meeting

Hi Robin, Nancy and Sam,

Attached is the list of RSVPs for Thursday's Scientific Integrity Stakeholder meeting. Congressman Paul Tonko has RSVP'ed, along with two of his staffers. Additionally, a staffer for House Science has also RSVP'ed.

Robin – can you please work with your team and Sam to work out the logistics for the Congressman's arrival? Additionally, can we find out if he is just planning to attend or would like to speak? I've included the draft agenda here, there is a question and answer time at 2:50pm which is when people have a chance to speak so I imagine that would be the most appropriate time for him to speak but I don't know how this normally works. Please let me know how I can help.

Thanks,  
Maggie

Maggie Sauerhage  
Office of Public Affairs  
U.S. Environmental Protection Agency  
Office: (202) 564-0443  
Cell: **Ex. 6 Personal Privacy (PP)**

---

**From:** Otto, Martha  
**Sent:** Monday, June 17, 2019 12:53 PM  
**To:** Sauerhage, Maggie <[Sauerhage.Maggie@epa.gov](mailto:Sauerhage.Maggie@epa.gov)>  
**Cc:** Grifo, Francesca <[Grifo.Francesca@epa.gov](mailto:Grifo.Francesca@epa.gov)>; Neumann, Blake <[neumann.blake@epa.gov](mailto:neumann.blake@epa.gov)>;  
Cogliano, Vincent <[cogliano.vincent@epa.gov](mailto:cogliano.vincent@epa.gov)>  
**Subject:** 6.17\_Stakeholder\_RSVP\_List ONLY IN PERSON RSVPs.xlsx

Hi, Maggie,

As of noon today, attached is the list of people who have RSVPed and indicated that they were attending in person or it was ambiguous whether it would be by phone or in person.

Please let me know if you need anything else for the security folks.

Thanks,  
Marti

Martha Otto  
Office of the Science Advisor  
mail code 8105R  
tel: 202.564.2782  
[otto.martha@epa.gov](mailto:otto.martha@epa.gov)

## Appointment

---

**From:** Wehrum, Bill [Wehrum.Bill@epa.gov]  
**Sent:** 2/8/2018 3:36:19 PM  
**To:** Wehrum, Bill [Wehrum.Bill@epa.gov]; Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]; Harlow, David [harlow.david@epa.gov]  
**CC:** Woods, Clint [woods.clint@epa.gov]

**Subject:** Meet with Competitive Enterprise Institute (Confirmed)

**Attachments:** FW: Bill, We'd like to chat with you; Confirmed 2/16 at 2pm: Bill, We'd like to chat with you

**Location:** WJC-N 5400 + Dial: **Ex. 6 Personal Privacy (PP)**

**Start:** 2/16/2018 7:00:00 PM

**End:** 2/16/2018 7:45:00 PM

**Show Time As:** Busy

Message

---

**From:** Atkinson, Emily [Atkinson.Emily@epa.gov]  
**Sent:** 2/8/2018 4:36:26 PM  
**To:** Myron Ebell [Myron.Ebell@cei.org]  
**Subject:** Confirmed 2/16 at 2pm: Bill, We'd like to chat with you

Hi Myron,

Great – so you are confirmed for a 45 minute meeting on Friday, February 16 at 2:00pm with Bill Wehrum. I believe you all know how to get to our offices, but just in case see below for directions.

Directions and procedures to 1200 Pennsylvania Avenue NW:

**Metro:** If you come by Metro get off at the Federal Triangle metro stop. Exit the metro station and go up two sets of escalators to the surface level and turn right. You will see a short staircase and wheelchair ramp leading to a set of glass doors with the EPA logo - that is the William Jefferson Clinton Federal Building, North Entrance.

**Taxi:** Direct the taxi to drop you off on 12th Street NW, between Constitution and Pennsylvania Avenues, at the elevator for the Federal Triangle metro stop - this is almost exactly half way between the two avenues on 12<sup>th</sup> Street NW. Facing the building with the EPA logo and American flags, walk toward the building and take the glass door on your right hand side with the escalators going down to the metro on your left – that is the North Lobby of the William Jefferson Clinton building.

**Security Procedures:** A government issued photo id is required to enter the building and it is suggested you arrive 15 minutes early in order to be cleared and arrive at the meeting room on time. Upon entering the lobby, the meeting attendees will be asked to pass through security and provide a photo ID for entrance. Let the guards know that you were instructed to call 202-564-7404 for a security escort.

Please feel free to contact me should you need any additional information.

Emily

Emily Atkinson  
Management Analyst/Office Manager  
Immediate Office of the Assistant Administrator  
Office of Air and Radiation, USEPA  
Room 5412B, 1200 Pennsylvania Avenue NW  
Washington, DC 20460  
Voice: 202-564-1850  
Email: atkinson.emily@epa.gov

---

**From:** Myron Ebell [mailto:Myron.Ebell@cei.org]  
**Sent:** Thursday, February 08, 2018 11:33 AM  
**To:** Atkinson, Emily <Atkinson.Emily@epa.gov>  
**Subject:** RE: Bill, We'd like to chat with you

Dear Emily, Thanks. Yes, that's a good time for both Steve and me. As I said, Marlo Lewis may also join us. Yours, Myron.

Myron Ebell  
Director, Center for Energy and Environment  
Competitive Enterprise Institute

1310 L Street, N. W., Seventh Floor  
Washington, DC 20005, USA

Tel direct: Ex. 6 Personal Privacy (PP)

Tel mobile:

E-mail: [Myron.Ebell@cei.org](mailto:Myron.Ebell@cei.org)

*Stop continental drift!*

---

**From:** Atkinson, Emily [<mailto:Atkinson.Emily@epa.gov>]

**Sent:** Thursday, February 8, 2018 10:37 AM

**To:** Myron Ebell <[Myron.Ebell@cei.org](mailto:Myron.Ebell@cei.org)>

**Subject:** RE: Bill, We'd like to chat with you

Hi Myron,

Bill Wehrum asked that I reach out to get a meeting setup. He could be available for a 45 minute meeting at EPA on Friday, February 16 at 2:00pm.

Please advise if this could work on your end.

Emily

Emily Atkinson  
Management Analyst/Office Manager  
Immediate Office of the Assistant Administrator  
Office of Air and Radiation, USEPA  
Room 5412B, 1200 Pennsylvania Avenue NW  
Washington, DC 20460  
Voice: 202-564-1850  
Email: [atkinson.emily@epa.gov](mailto:atkinson.emily@epa.gov)

---

**From:** Myron Ebell [<mailto:Myron.Ebell@cei.org>]

**Sent:** Tuesday, February 6, 2018 5:53 PM

**To:** Wehrum, Bill <[Wehrum.Bill@epa.gov](mailto:Wehrum.Bill@epa.gov)>

**Subject:** Bill, We'd like to chat with you

Dear Bill, Steve Milloy and I (and perhaps Marlo Lewis) would like to come chat with you about a couple issues related to the use or rather misuse of science in the Clean Air Act regulatory process. We know you're swamped, so won't take a lot of your time. Yours,  
Myron.

Myron Ebell  
Director, Center for Energy and Environment  
Competitive Enterprise Institute  
1310 L Street, N. W., Seventh Floor  
Washington, DC 20005, USA  
Tel direct: Ex. 6 Personal Privacy (PP)  
Tel mobile:  
E-mail: [Myron.Ebell@cei.org](mailto:Myron.Ebell@cei.org)  
*Stop continental drift!*

Message

---

**From:** Wehrum, Bill [Wehrum.Bill@epa.gov]  
**Sent:** 2/6/2018 10:59:13 PM  
**To:** Lewis, Josh [Lewis.Josh@epa.gov]; Atkinson, Emily [Atkinson.Emily@epa.gov]  
**CC:** Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]  
**Subject:** FW: Bill, We'd like to chat with you

Meeting request ...

---

Bill Wehrum  
Assistant Administrator  
Office of Air and Radiation  
U.S. Environmental Protection Agency  
(202) 564-7404

---

**From:** Myron Ebell [mailto:Myron.Ebell@cei.org]  
**Sent:** Tuesday, February 6, 2018 5:53 PM  
**To:** Wehrum, Bill <Wehrum.Bill@epa.gov>  
**Subject:** Bill, We'd like to chat with you

Dear Bill, Steve Milloy and I (and perhaps Marlo Lewis) would like to come chat with you about a couple issues related to the use or rather misuse of science in the Clean Air Act regulatory process. We know you're swamped, so won't take a lot of your time. Yours,  
Myron.

Myron Ebell  
Director, Center for Energy and Environment  
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1310 L Street, N. W., Seventh Floor  
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Tel mobile: (202) 462-6001  
E-mail: [Myron.Ebell@cei.org](mailto:Myron.Ebell@cei.org)  
*Stop continental drift!*

## Contact

---

**Full Name:** Steve Milloy

**Last Name:** Milloy

**First Name:** Steve

**Home Phone:** Ex. 6 Personal Privacy (PP)



**From:** Block, Molly [block.molly@epa.gov]  
**Sent:** 6/12/2018 6:46:49 PM  
**To:** Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]; Dominguez, Alexander [dominguez.alexander@epa.gov]  
**Subject:** FOR REVIEW: Daily Caller (M. Bastasch) - EPA glider study - ASAP  
**Attachments:** EPA-HQ-OAR-2014-0827-2417.pdf

## Ex. 5 Deliberative Process (DP)

Please let me know if you have any edits/suggestions.

---

**From:** Daguillard, Robert  
**Sent:** Tuesday, June 12, 2018 2:26 PM  
**To:** Press <Press@epa.gov>  
**Subject:** FOR REVIEW: Daily Caller (M. Bastasch) - EPA glider study - ASAP

SUMMARY: The reporter also reached out directly to the program. OK to attribute to a spokesperson, since the information specifically refers to a specific study and to Volvo? Michael Bastasch – Daily Caller-  
[mike@dailycallernewsfoundation.org](mailto:mike@dailycallernewsfoundation.org)

### DRAFT responses to emailed questions form Michael Bastach, Dailey Caller News Foundation, from June 12, 2018

**Question 1: Where did the idea for the study originate?**

## Ex. 5 Deliberative Process (DP)

**Question 2: Did EPA approach Volvo about procuring glider kits for testing, or did they approach EPA?**

# Ex. 5 Deliberative Process (DP)

Question 3: Why did EPA ask you guys for gliders instead of going to glider manufacturers?

# Ex. 5 Deliberative Process (DP)

Question 4: Also, how did Volvo get a copy of EPA's study despite it never being released by the agency?

# Ex. 5 Deliberative Process (DP)

---

**From:** Birgfeld, Erin  
**Sent:** Tuesday, June 12, 2018 11:12 AM  
**To:** Hengst, Benjamin <[Hengst.Benjamin@epa.gov](mailto:Hengst.Benjamin@epa.gov)>  
**Subject:** Fwd: EPA glider study

Hi Ben,

FYI. I will send to OPA for handling this afternoon. Call me if you want to discuss.

Thanks!

Sent from my iPhone

Begin forwarded message:

**From:** "Cullen, Angela" <[cullen.angela@epa.gov](mailto:cullen.angela@epa.gov)>  
**Date:** June 12, 2018 at 10:46:25 AM EDT  
**To:** "Birgfeld, Erin" <[Birgfeld.Erin@epa.gov](mailto:Birgfeld.Erin@epa.gov)>  
**Cc:** "Charmley, William" <[charmley.william@epa.gov](mailto:charmley.william@epa.gov)>, "Mylan, Christopher" <[Mylan.Christopher@epa.gov](mailto:Mylan.Christopher@epa.gov)>  
**Subject:** FW: EPA glider study

Hi Erin,

I received this email from the press today. How would you like us to proceed?

Thank you,  
Angela

**From:** Michael Bastasch [<mailto:mike@dailycallernewsfoundation.org>]

**Sent:** Tuesday, June 12, 2018 9:11 AM

**To:** Cullen, Angela <[cullen.angela@epa.gov](mailto:cullen.angela@epa.gov)>

**Subject:** EPA glider study

Hi Angela,

I don't know if you've seen this, but [Junkscience.com](https://junkscience.com) published a series of emails between you and Volvo lobbyist Steve Berry on the glider study released last year.

<https://junkscience.com/2018/06/exposed-e-mails-reveal-volvo-trucks-obama-leftover-epa-staff-rig-agency-test-in-effort-to-destroy-glider-truck-industry/>

I had a couple questions with Volvo's involvement in the study. Where did the idea for the study originate? Did EPA approach Volvo about procuring glider kits for testing, or did they approach EPA?

Why did EPA ask you guys for gliders instead of going to glider manufacturers? Also, how did Volvo get a copy of EPA's study despite it never being released by the agency?

Let me know. Thanks!

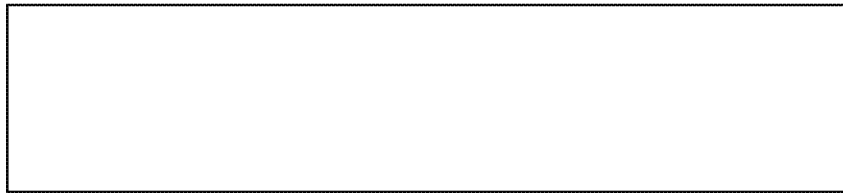
Best,

Mike

--

Michael Bastasch

Daily Caller News Foundation



# Chassis Dynamometer Testing of Two Recent Model Year Heavy-Duty On-Highway Diesel Glider Vehicles

November 20, 2017

National Vehicle & Fuel Emissions Laboratory  
U.S. Environmental Protection Agency  
Ann Arbor, Michigan

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## 1. Executive Summary

This report summarizes the results from emissions testing of a 2016 model year (MY) Peterbilt 389 sleeper cab tractor and a 2017 MY Peterbilt 579 sleeper cab tractor that were produced as glider vehicles (i.e., a vehicle with a new chassis and a used powertrain). In addition, these glider test results are compared to equivalent tests of conventionally manufactured 2014 and 2015 MY tractors.

The glider vehicles tested include one of the more popular engine and vehicle configurations currently being produced as glider vehicles. These results are useful in evaluating the emission impacts of glider vehicles, and the observations made in this report are consistent with the expected emissions performance of heavy-duty highway diesel engines manufactured in the 1998-2002 timeframe.

The criteria pollutant emissions (NO<sub>x</sub>, PM, HC, CO) from the 2016 MY Peterbilt 389 and 2017 Peterbilt 579 glider vehicles were consistently higher than those of the conventionally manufactured 2014 and 2015 tractors. The extent to which this occurred depended on the pollutant and the test cycle.

- Under highway cruise conditions, NO<sub>x</sub> emissions from the Peterbilt 389 and Peterbilt 579 glider vehicles were approximately 43 times as high, and PM emissions were approximately 55 times as high as the conventionally manufactured 2014 and 2015 MY tractors.
- Under transient operations, absolute NO<sub>x</sub> and PM emissions were higher for the Peterbilt 389 and Peterbilt 579 glider vehicles on all duty cycles. On a relative basis, the glider vehicle NO<sub>x</sub> emissions were 4-5 times higher, and PM emissions were 50-450 times higher than the conventionally manufactured 2014 and 2015 MY tractors.
- HC and CO emissions for the Peterbilt 389 and Peterbilt 579 glider vehicles were also significantly higher than the conventionally manufactured 2014 and 2015 MY tractors on a relative basis. However, on an absolute basis, they appear to be less of a concern than the NO<sub>x</sub> and PM emissions.
- CO<sub>2</sub> emissions from the Peterbilt 389 and Peterbilt 579 glider vehicles were lower than the conventionally manufactured vehicles when measured on the chassis dynamometer without taking into account the differences in the aerodynamic drag between the vehicles.

## 2. Test Program

All testing was conducted by the US Environmental Protection Agency (EPA) in October and November 2017 at the National Vehicle Fuel and Emissions Laboratory (NVFEL). Two glider vehicles were tested on a heavy-duty chassis dynamometer to measure the emissions in a controlled environment. The following subsections describe the elements of the test program.

The testing was conducted using the same test cycles and test procedures that EPA has previously used to measure emissions from heavy-duty diesel vehicles, which allows us to put glider vehicle emission results into context. Comparisons to these other highway heavy-duty vehicles are discussed in Section 4.

### 2.1 Glider Vehicle Descriptions

Two newer model year glider vehicles with remanufactured pre-2002 MY engines were emissions tested in this program.

#### 2.1.1 Glider #1 Vehicle Description

The first glider vehicle tested (Glider #1) was a 2016 MY Peterbilt 389 Glider-Sleeper with a Fitzgerald-rebuilt 12.7 L Detroit Diesel Series 60 engine with 500 horsepower, an Eaton 13 speed manual transmission, and 3.55 rear axle ratio. The Peterbilt 389 exterior has a traditional design that has a squarer front rather than a more aerodynamic design that is more common for model year 2016 and later model vehicles. The engine did not include an emission label, but is believed to have been remanufactured from an engine originally certified in a model year between 1998 and 2002. It included electronically-controlled fuel injection, but not exhaust gas recirculation or any exhaust aftertreatment. The odometer read 179,273 miles at the start of testing.

The malfunction indicator light (MIL), also known as the check engine light, was illuminated when Glider #1 was received. Upon inspection it was determined that the engine fault code was “Engine Oil Pressure> Fault Mode ID:0-DATA VALID BUT ABOVE NORMAL OPERATIONAL RANGE.” EPA tested the as-received condition because it is representative of how the vehicle was driving in the real world. Upon completion of the first set of testing, diagnostics were performed to fix the issue. CAN bus data recorded during testing was reviewed and it was determined that in addition to the oil pressure signal, temperature readings from the fuel, oil and intake air sensor were all dropping low simultaneously. The sensor wiring harness was removed from the vehicle because the MIL was intermittent and identified an error with the oil pressure. The harness was inspected visually and evaluated for electrical continuity. During inspection it was determined that there was oil in the connector of the oil temperature sensor as well as fluid in the connector for the coolant sensor. These connectors were cleaned and the harness was reinstalled. Glider #1 was then driven and it was concluded that the repair was successful. The On-Board Diagnostics (OBD) system did not

detect an issue for the remainder of testing. The emissions tests were then repeated to evaluate the emissions of a properly performing vehicle.

### 2.1.2 Glider #2 Vehicle Description

The second glider vehicle tested (Glider #2) was a 2017 MY Peterbilt 579 Glider-Sleeper cab tractor with a Fitzgerald-rebuilt 12.7 L Detroit Diesel Series 60 engine with 500 horsepower and an Eaton RTX-16710B 10 speed manual transmission. The body of the Peterbilt 579 tractor was more aerodynamic than the Peterbilt 389. Similar to Glider #1, the engine in this vehicle did not include an emission label, but is believed to have been remanufactured from an engine originally certified in a model year between 1998 and 2002. It included electronically-controlled fuel injection, but not exhaust gas recirculation or any exhaust aftertreatment. The vehicle had approximately 30,600 miles at the start of testing. Unlike Glider #1, Glider #2 did not have any check engine light warnings during the testing.

## 2.2 Road Load Coefficients

Chassis dynamometer testing requires a simulation of the road load impacts, such as aerodynamics and losses associated with the driveline. These parameters simulate the amount of resistance (i.e., load) that the vehicle is under at different vehicle speeds. The actual road load impact varies significantly in-use because it is dependent on variables such as an actual trailer being pulled and the weight of the vehicle. Road load coefficients are frequently determined by conducting coastdown testing prior to chassis dynamometer testing. In this instance, EPA did not conduct coastdown testing to determine the road load coefficients of the vehicles due to the limited amount of time the glider vehicles were on loan to EPA. Rather, we tested the vehicles each with two sets of road load coefficients covering a range of typical operation. The first set of road load coefficients represents a 60,000 pound combined weight of the tractor, trailer, and payload. The second set of road load coefficients represents a less aerodynamic vehicle with 80,000 pound combined weight of the tractor, trailer, and payload. The target and actual road load coefficients used in the testing are shown in Table 1.

**Table 1: Road Load Coefficients**

Configuration	Target Coefficients			Set Coefficients		
	A (lbf)	B (lbf/mph)	C (lbf/mph <sup>2</sup> )	A (lbf)	B (lbf/mph)	C (lbf/mph <sup>2</sup> )
Glider #1, 60k Test Weight	345.090	0.0000	0.15380	235.350	-2.1042	0.143390
Glider #1, 80k test weight	446.350	7.76060	0.14780	336.690	5.5976	0.137120
Glider #2, 60k Test Weight	345.090	0.0000	0.15380	204.530	-1.4243	0.145510
Glider #2, 80k test weight	446.350	7.76060	0.14780	314.620	5.9516	0.145980



## 2.3 Test Fuel

The test fuel used in this program met the EPA highway certification diesel fuel specifications in 40 CFR part 1065. The fuel properties can be found in Table 2. The glider vehicles went through a triple drain and flush procedure as shown in Table 3 to ensure the engine was operating on the test fuel.

**Table 2: Certification Diesel Fuel Specifications**

FTAG	Fuel Name	ALPHA	BETA	Cetane	Net Heating Value (BTU/lb)	Carbon Weight Fraction	Sulfur (ppm)	Specific Gravity
26758	Federal Cert Diesel 7-15 ppm Sulfur	1.78	0	44.3	18406	0.8699	8.4	0.8536

**Table 3: Fuel change procedure**

Step	Description
1	With the ignition key in OFF position, drain vehicle fuel completely via installed fuel drain or the fuel rail.
2	Fill fuel tank to 10% with Diesel Fuel, NVFEL FTAG 26758.
3	Operate the vehicle at idle for 10-15 minutes to allow the fuel system to purge and stabilize.
4	Repeat Steps 1-3. (If repeated steps 1-3, move to Step 5)
5	Repeat Steps 1-3, but fill the fuel tank to 100% with NVFEL Diesel Fuel, FTAG 26758.
6	Run vehicle road load derivations.

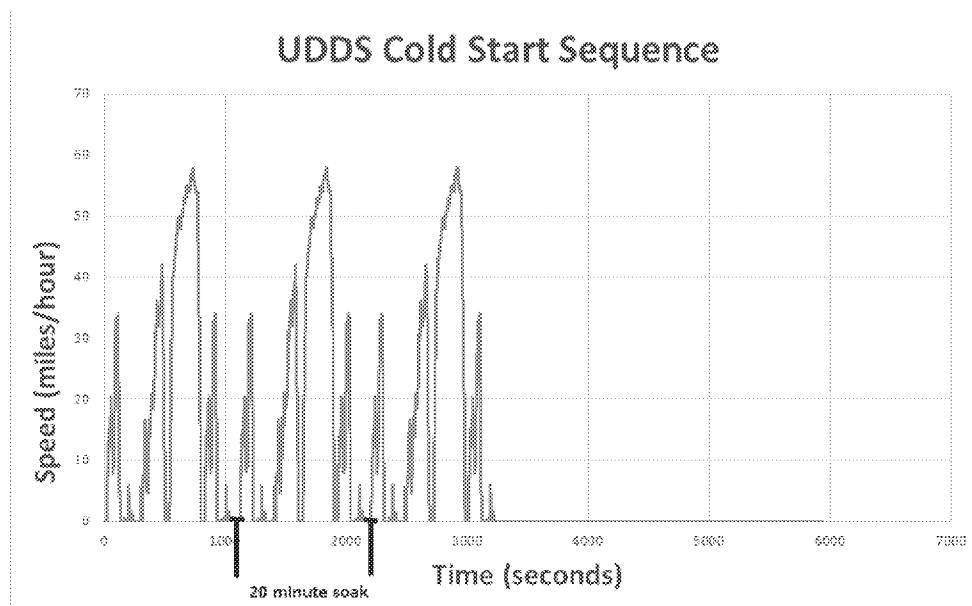
## 2.4 Test Cycles

The emission tests for both gliders were conducted on a chassis dynamometer using three different sets of heavy-duty drive cycles representing a variety of operation. A cold start Heavy-Duty Vehicle Urban Dynamometer Driving Schedule (UDDS) sequence, a World Harmonized Vehicle Cycle (WHVC) sequence, and a Super Cycle.

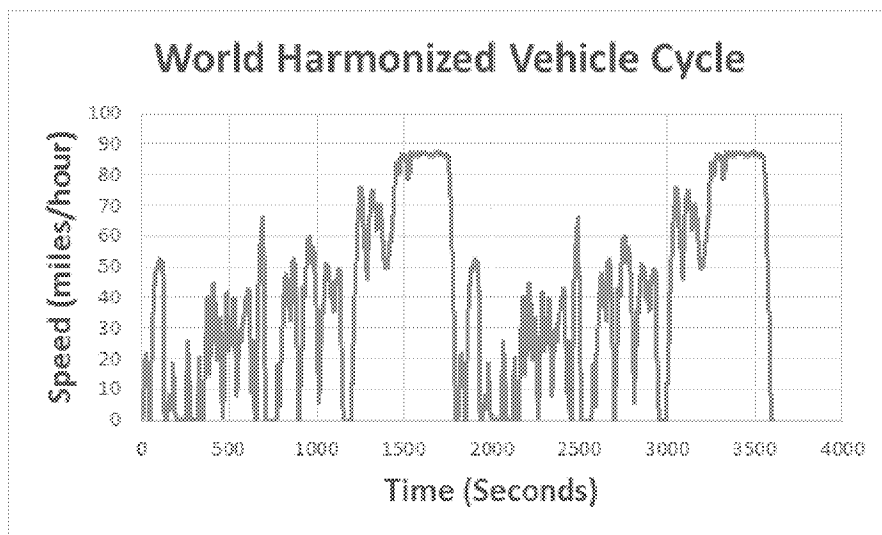
The cold start sequence consisted of the UDDS cycle, a twenty-minute soak period followed by another UDDS, another twenty-minute soak period, a third UDDS cycle and finishing with forty-five minutes of idling. The UDDS sequence is shown in Figure 1.

The World Harmonized Vehicle Cycle (WHVC) was first run as a warmup cycle without emission measurement followed by a second WHVC where emissions were measured. The WHVC cycle is shown in Figure 2.

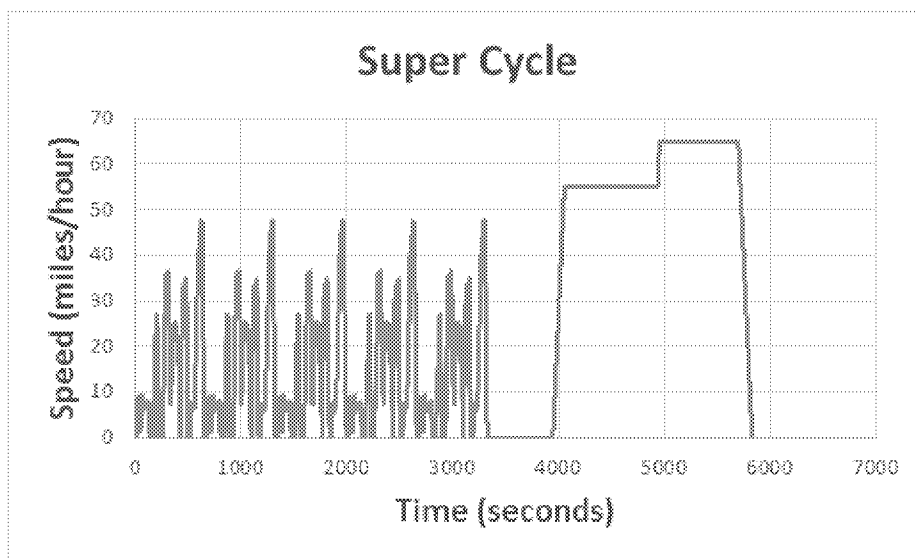
The Super Cycle followed the WHVC sequence. If more than twenty minutes elapsed between the cycles, then another warm-up WHVC was run without emission measurement to ensure the Super Cycle included a hot start test. The Super Cycle consists of five California Air Resources Board (ARB) Heavy-Duty Transient Cycles (HDT), a ten-minute idle period, and 55 mph and 65 mph cruise cycles with 0.5 mph/sec acceleration/deceleration rates. The Super Cycle trace is shown in Figure 3.



**Figure 1: EPA UDDS test cycle speed vs. time profile**



**Figure 2: World Harmonized Vehicle Cycle speed vs. time profile**



**Figure 3: Super Cycle speed vs. time profile**

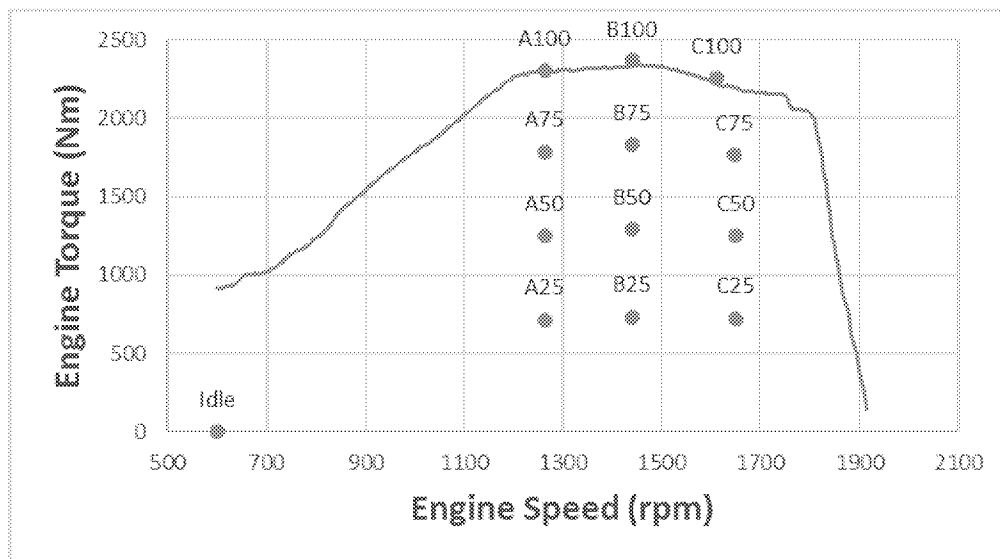
Chassis testing of Glider #2 was also conducted to simulate the engine-based Supplemental Emission Test (SET) defined in 40 CFR 86.1360. Duty cycles were created that matched the defined engine speeds of the SET cycle by driving the vehicle at a constant speed and matched engine torque at the 100%, 75%, 50% and 25% load points at each speed by varying simulated road grade.

The first step of the SET cycle development was to obtain the engine torque curve. This was done by having the dynamometer linearly ramp the vehicle speed from approximately 16 to 68 mph over 315 seconds with the pedal position at 100%. Since the dynamometer was controlling speed for this test instead of torque, the engine power was determined by using the

measured power from the dynamometer corrected for the tire and driveline losses by taking the difference of the losses of target and set coefficients and an assumed axle efficiency of 94%. The resulting torque curve from the test is shown in Figure 4. Using the torque curve, the intermediate test speeds “A”, “B”, and “C” were calculated according to 40 CFR 1065.610.

Finally, three vehicle duty-cycles were created to simulate the engine-based SET on the chassis dynamometer, one for each intermediate speed as shown in Figure 5, Figure 6 and Figure 7. This duty cycle is similar to running the SET as a discrete mode test where the engine is stabilized at each speed and torque setpoint before sampling emissions and the transitions from mode-to-mode are not sampled. The duty cycles were created in this manner because running a Ramped Modal Cycle (RMC) on a chassis dynamometer would be difficult and would not allow for the transmission to be kept in direct drive.

Figure 4 also shows the engine speed and torque where the engine operated for each SET setpoint during the testing. One observation from this figure is that the test speed for the C100 point was slightly lower than the setpoint. This was because the engine was not able to maintain vehicle speed at the defined road grade of the cycle, but since the shift in speed was slight the results were still meaningful for the purpose of this testing.



**Figure 4: Glider #2 torque curve and SET test points**

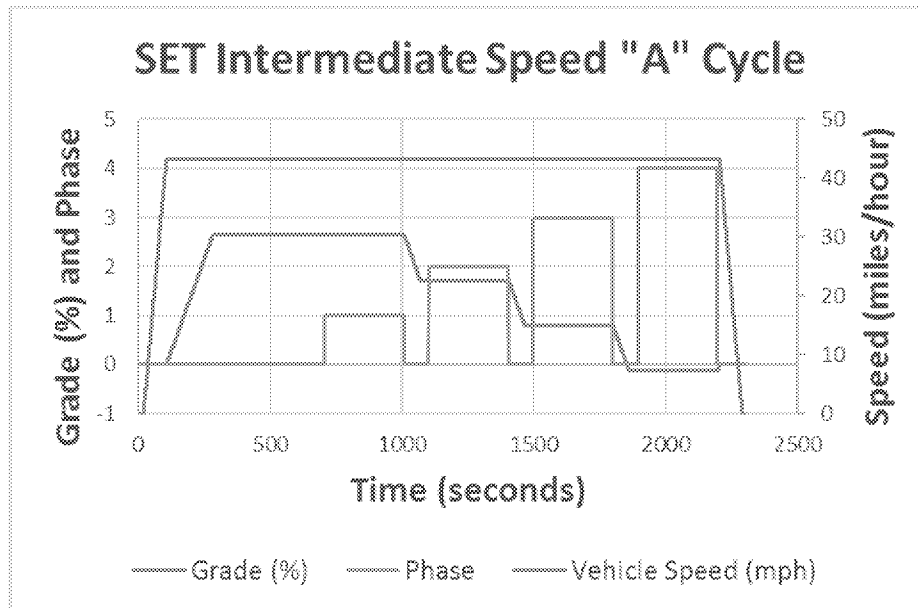


Figure 5: SET Intermediate Speed “A” Cycle speed, grade and phase vs. time

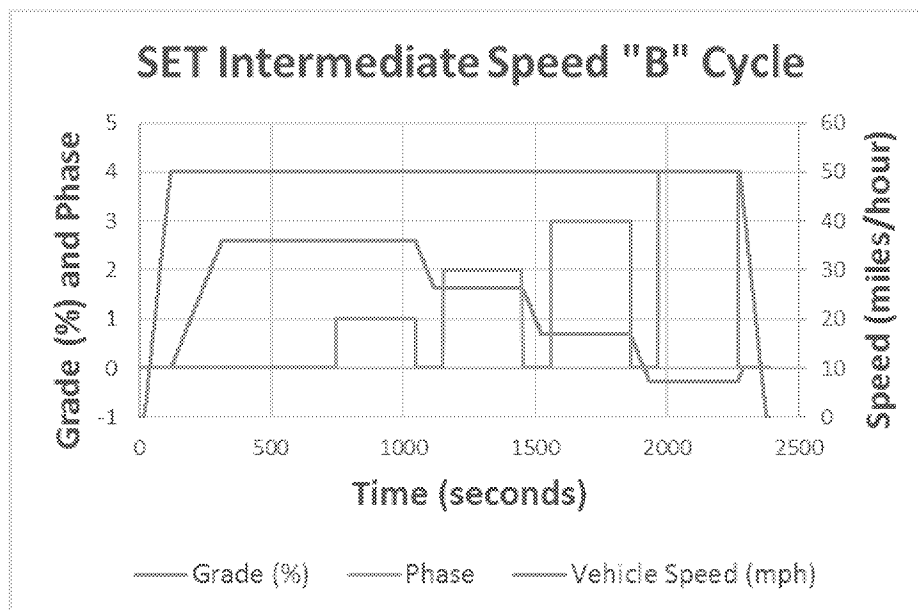
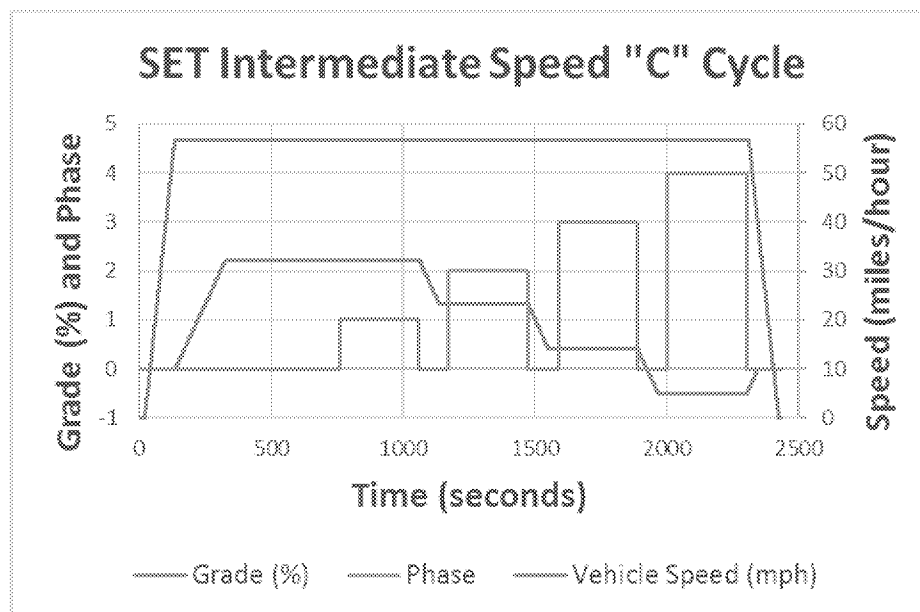


Figure 6: SET Intermediate Speed “B” Cycle speed, grade and phase vs. time



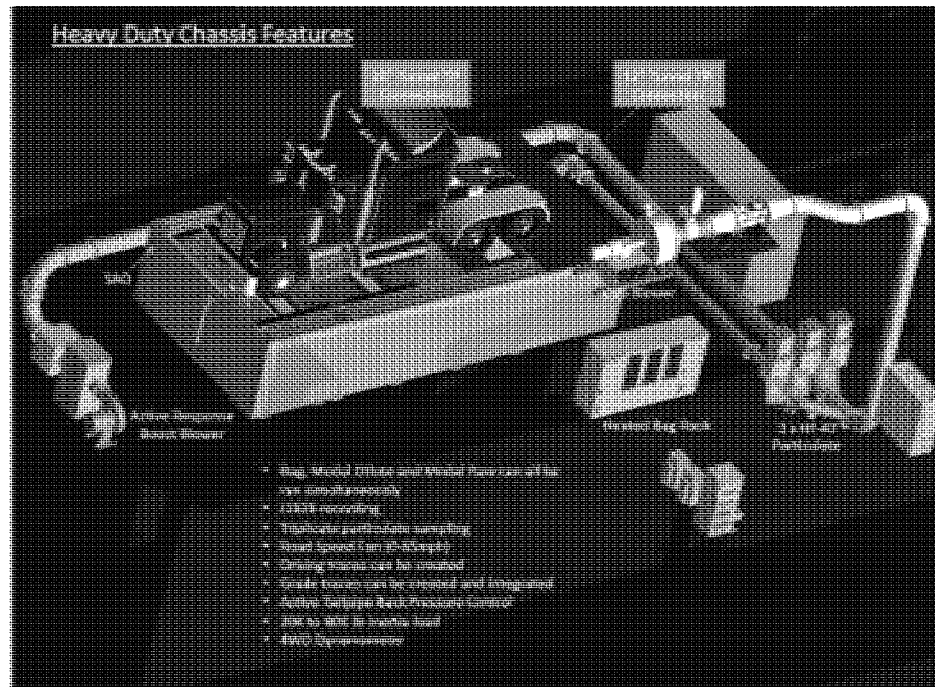
**Figure 7: SET Intermediate Speed “C” Cycle speed, grade and phase vs. time**

## 2.5 Vehicle Test Site and Emission Measurements

The chassis dynamometer used for this study is located at the EPA’s National Vehicle & Fuels Emissions Laboratory in Ann Arbor, Michigan. The test site features are shown in Figure 8. Table 4 provides information on the test site equipment. The emissions measured include total hydrocarbons (THC), methane (CH<sub>4</sub>), nonmethane hydrocarbon (NMHC), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), and particulate matter (PM as PM<sub>10</sub>).<sup>1</sup> The emission measurement system for both gaseous and PM based pollutants is based on the Horiba MEXA-ONE platform and is compliant with the requirements in 40 CFR part 1066. The particulate matter weighroom is compliant with 40 CFR 1065.190, including temperature and dewpoint control. The PM weighroom was designed to be compliant as a Class 6 cleanroom or better and meets all of the ambient requirements described in 40 CFR part 1065. The Mettler-Toledo microbalance is compliant with the requirements in 40 CFR 1065.290. The microbalance calibration is NIST traceable as required in 40 CFR part 1065. The weighroom and microbalance provide the ability to accurately measure PM mass gain down to the 1 ug level. The system as a whole can measure PM mass emission rates as low 0.001 g/hp-hr and as high as 2 g/hp-hr.

EPA also utilized an AVL Model 483 MicroSoot Sensor to collect continuous soot data on Glider #2 for a subset of the testing. That data is not presented in this test report.

<sup>1</sup> No attempt was made to measure crankcase emissions from the glider vehicles. However, the distinctive odor of blowby exhaust in the test cell during testing of both glider vehicles (compared to testing other vehicles) indicates that that crankcase emissions could be high.



**Figure 8: Chassis Dynamometer Overview**

**Table 4: Test site equipment**

Features and Specifications	
4WD Chassis Dynamometer	Type: AIP-ECDM 72H-4WD Operating Speed Range: 0 – 100 mph (0 – 160 km/h) Max Axle Weight of the test vehicle: 44,000 lb (20000 kg) Inertia simulation of up to 80,000 lb (36500 kg)
	Fuel Diesel, Electric, Gasoline & Ethanol Blends
Emissions Sampling	Continuous Gaseous: Raw and Diluted simultaneous Batch: Gaseous Bag
	Emission Analyzers MEXA-ONE platform, Continuous: CO(L), CO(H), CO <sub>2</sub> , O <sub>2</sub> , THC, CH <sub>4</sub> , NO/NO <sub>x</sub> Batch: CO(L), CO <sub>2</sub> (L), THC, CH <sub>4</sub> , NO/NO <sub>x</sub> , N <sub>2</sub> O
Dilution Tunnel	Heated 12 inch (30.5cm) and 18 inch (45.7cm) diameter tunnel, 4 Critical Flow Venturis allow flow combinations from 19.8 to 116.1 m <sup>3</sup> /min (700 to 4100 scfm). Active tailpipe pressure control
Road Speed Fan	70" x 70" road speed modulated vehicle cooling fan
Particulate	Up to 4 phases sampled in triplicate with secondary dilution available, mass determined with Mettler-Toledo microbalance.
Research Focus	On road heavy-duty and medium-duty vehicles above 20,000 pounds GVWR
CFR scope	40 CFR Part 86 & 1066 define the heavy-duty vehicle test procedures.

There were several verification and maintenance activities conducted in the test site to maintain quality assurance. All analyzer checks were performed according to 40 CFR part 1066 specifications. The activities included, but were not limited to, the following:

- Daily: Cell preparation checks ran included bag leak checks, sample line leak checks and analyzer zero and span checks.
- Weekly: Dynamometer coastdowns at 20,000 lb and 80,000 lb for MAHA 4WD dynamometer, Dynamometer Parasitic Losses Verification, Gravimetric Propane Injection for THC, Sample Analysis Correlations for bag checks on CO, CO<sub>2</sub>, CH<sub>4</sub>, NO<sub>x</sub> emissions.
- Every 35 days: CH<sub>4</sub> Gas Chromatography column efficiency check, NO<sub>x</sub> converter check, chemiluminescent detector CO<sub>2</sub> + H<sub>2</sub>O Quench Check, and gas analyzer linearity checks per 40 CFR part 1066.
- Typically, annually: Flame ionization detector (FID) O<sub>2</sub> inference check, FID response factor check, nondispersive infrared (NDIR) analyzer interference checks, and emissions sampling unit (ESU) leak check.

### 3. Emissions Results

#### 3.1 Criteria Pollutants

The average emission results of the individual vehicles tested over the UDDS, WHVC, and Super Cycle are found in the following tables for NO<sub>x</sub>, NMHC, and CO. The other gaseous emissions such as THC, CH<sub>4</sub>, and CO<sub>2</sub> are found in Appendices A, B and C.

The UDDS cycle began with a cold start. The testing sequence included an initial cold start UDDS, then a 20-minute soak followed by another UDDS, a 20-minute soak and UDDS followed by 45 minutes of idle. The emission results for testing at 60,000 pounds and 80,000 pounds for both glider vehicles are shown in Table 5. Glider #1, a 2016 MY Peterbilt 389 sleeper cab tractor, values only include the results from the tests after the check engine light issue was fixed. The results represent an average emissions of the tests performed for a given vehicle and configuration. See Appendix A for additional emissions results, including the results from the individual tests and the results from Glider #1 with the check engine light on.

**Table 5: UDDS Results from the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2**

UDDS		NO <sub>x</sub>			Non-Methane Hydrocarbons (NMHC)			Carbon Monoxide (CO)		
Vehicle Test Weight (lbs)	Vehicle	Cold UDDS (g/mi)	Inter. UDDS (g/mi)	Hot UDDS (g/mi)	Cold UDDS (g/mi)	Inter. UDDS (g/mi)	Hot UDDS (g/mi)	Cold UDDS (g/mi)	Inter. UDDS (g/mi)	Hot UDDS (g/mi)
60,000	Glider #1	27.80	20.24	20.02	0.427	0.437	0.454	13.59	10.91	10.76
	Glider #2	32.42	25.01	23.55	0.613	0.388	0.397	12.32	11.16	10.85
80,000	Glider #1	36.18	27.66	27.04	0.426	0.429	0.436	17.50	15.78	14.86
	Glider #2	40.26	33.50	32.01	0.241	0.063	0.073	15.47	15.13	15.16



For the WHVC, the first cycle was a warmup and emissions were not measured. The average results for the hot start cycle are shown in Table 6. See Appendix B for additional emission results.

**Table 6: WHVC Results from the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2**

World Harmonized Vehicle Cycle		NO <sub>x</sub>	NMHC	CO
Vehicle Test Weight (lbs)	Vehicle	WHVC (g/mi)	WHVC (g/mi)	WHVC (g/mi)
60,000	Glider #1	16.81	0.386	9.24
	Glider #2	20.15	0.290	8.96
80,000	Glider #1	23.43	0.343	13.92
	Glider #2	26.73	0.308	11.86

The Super Cycle provided information across more driving conditions as it contains five ARB Heavy Duty Transient Cycles (HHDDT), a ten-minute idle period followed by 55 mph and 65 mph cruise periods with 0.5 mph/sec acceleration and deceleration rates. The results are shown in Table 7 for 60,000 lb and 80,000 lb loads respectively for both glider vehicles. See Appendix C for additional emission results.

**Table 7: Super Cycle Results from the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2**

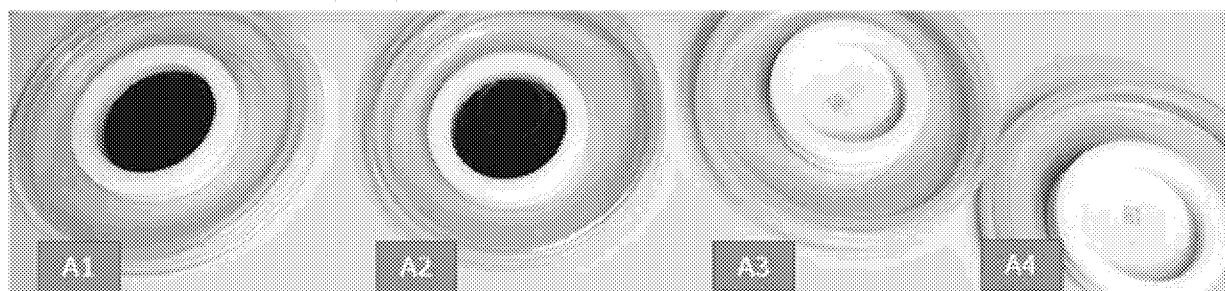
Super Cycle		NO <sub>x</sub>			Non-Methane Hydrocarbons (NMHC)			Carbon Monoxide (CO)		
Vehicle Test Weight (lbs)	Vehicle	ARB Transient 1 (g/mi)	ARB Transient 2 (g/mi)	55/65 Cruise (g/mi)	ARB Transient 1 (g/mi)	ARB Transient 2 (g/mi)	55/65 Cruise (g/mi)	ARB Transient 1 (g/mi)	ARB Transient 2 (g/mi)	55/65 Cruise (g/mi)
60,000	Glider #1	22.26	22.28	13.55	0.705	0.759	0.209	16.68	16.25	1.55
	Glider #2	24.94	24.92	16.64	0.603	0.620	0.157	15.61	15.48	1.41
80,000	Glider #1	29.14	28.68	25.22	0.715	0.710	0.202	21.79	21.10	2.64
	Glider #2	32.57	32.69	28.62	0.563	0.607	0.180	18.07	18.57	2.42

### 3.2 Particulate Matter (PM)

Particulate matter emissions were measured in triplicate to provide replicate samples for analysis. The glider vehicles emitted significantly more particulate matter than the typical heavy-duty diesel vehicles tested in the laboratory. Therefore, using our typical dilution rates and filter face velocity settings, the filters were overloaded with particulate matter during our initial testing with Glider #1. This caused a PM equipment alarm during phase 2 of the Super Cycle and therefore phases 3 and 4 were not sampled. A picture of the filters is shown in Figure 9. Several iterations were performed with different filter face velocity and dilution ratio settings to address

the issue. In the end, the filter face velocity was decreased from 100 cm/s to 65 cm/s and a secondary dilution flow was added at 4:1.

Glider #1 – Super Cycle Test – 05OCT2017



**Figure 9: PM Filters from Glider #1 testing over the Super Cycle Test<sup>2</sup>**

The PM results for each of the test cycles at both test weights for both glider vehicles are shown in Table 8 through Table 10. Each value in the tables reflects the average of all tests for a given vehicle and configuration. The values for Glider #1 only include the emission values for the tests with the check engine light issue fixed. See Appendix A, B, and C for the results from the individual tests, including the Glider #1 tests before the check engine light issue was resolved.

**Table 8: UDDS PM Emissions from the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2**

UDDS		Particulate Matter		
Vehicle Test Weight (lbs)	Vehicle	Cold UDDS (mg/mi)	Inter. UDDS (mg/mi)	Hot UDDS (mg/mi)
60,000	Glider #1	500	567	602
	Glider #2	349	371	370
80,000	Glider #1	742	778	737
	Glider #2	451	445	434

<sup>2</sup> A1: Phase 1, hot start ARB Transient cycle; A2: Phase 2, four hot running ARB Transient cycles; A3: 10 minutes of measured idle; A4: 55/65 mph cruise. The PM sampling equipment shut down at phase 2 so filters A3 and A4 were not collecting PM.

**Table 9: WHVC PM Emissions from the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2**

World Harmonized Vehicle Cycle		Particulate Matter
Vehicle Test Weight (lbs)	Vehicle	WHVC (mg/mi)
60,000	Glider #1	560
	Glider #2	349
80,000	Glider #1	745
	Glider #2	426

**Table 10: Super Cycle PM Emissions from the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2**

Super Cycle		Particulate Matter		
Vehicle Test Weight (lbs)	Vehicle	ARB Transient 1 (mg/mi)	ARB Transient 2 (mg/mi)	55/65 Cruise (mg/mi)
60,000	Glider #1	1028	997	177
	Glider #2	653	677	78
80,000	Glider #1	1340	1288	169
	Glider #2	701	705	90

### 3.3 Conversion of Distance Specific Emissions to Engine Work Specific Emissions

NO<sub>x</sub>, PM, CO, and HC emissions from highway heavy-duty diesel vehicles are controlled through EPA emission standards based on engine dynamometer testing using engine test cycles. There are various ways to estimate engine work from vehicle testing. The most common is to use engine reported speed and torque to calculate power. This methodology works well for modern engines where the engine's reference torque is known. Since the reference torque was not known for this engine, the engine work was estimated by using the chassis dynamometer target coefficients and the simulated vehicle mass, along with estimates for driveline efficiency.

To calculate the axle power, a modified version of Equation 1 in 40 CFR 1066.210 was used as shown in Equation A below.<sup>3</sup> This equation was modified in two ways. The first was multiplying the equation by vehicle speed to calculate power instead of force. The second

<sup>3</sup> See [https://ecfr.io/Title-40/sec40.37.1066\\_1210](https://ecfr.io/Title-40/sec40.37.1066_1210) for the description of the equation and units.

modification was removing the road grade terms from the equation since none of the cycles tested included road grade.

$$P_{\text{wheel},i} = \left( A + B \cdot v_i + C \cdot v_i^2 + M_e \cdot \frac{v_i - v_{i-1}}{t_i - t_{i-1}} \right) \cdot v_i, \text{ Eq. A}$$

Equation B was used to calculate engine power from wheel power. For this equation the axle and transmission efficiencies were estimated to be 94 percent. These values were based on the 2018 baseline data from the Heavy-Duty Greenhouse Gas and Fuel Efficiency Standards - Phase 2 rule.

$$P_{\text{engine},i} = \frac{P_{\text{wheel},i}}{0.94^2}, \text{ Eq. B}$$

All of the points where engine power was below zero were set to zero before the power was integrated to calculate work. This was done to be consistent with how work specific emissions are calculated in 40 CFR part 1065. Finally, all the tests and phases where the vehicle, configuration, and vehicle speed trace were the same, were averaged together. This was done because the only source of variation for this analysis is the slight changes in driven vehicle speed from test to test. The coefficient of variation was typically below 2 percent for the tests, which is below other sources of error that could influence this analysis to calculate engine work from chassis dynamometer tests. Table 11 contains a summary of the conversion rates for the glider vehicles.

**Table 11: Summary of vehicle miles per engine horsepower-hour**

Glider Vehicle	Test Weight (pounds)	WHVC Phase 1	HD UDDS Phase 1, 2 and 3	Super Cycle Phase 1 and 2	Super Cycle Phase 4
		miles / (hp-hr)			
#1	60,000	0.321	0.293	0.271	0.362
#1	80,000	0.224	0.201	0.189	0.228
#2	60,000	0.320	0.286	0.266	0.362
#2	80,000	0.219	0.198	0.188	0.229

This analysis estimates the engine work from chassis dynamometer testing and does not take into account a number of additional sources of load on the engine. Two of these sources are the engine accessory load and the additional power from when the engine is idling at a higher speed during warm-up.

### 3.4 Simulated HD Federal Test Procedure and Supplemental Emission Test Results

The on-highway heavy-duty engine emission standards are in grams per horsepower-hour based on engine test cycles. The current exhaust emissions standards for heavy-duty engines are 0.2 g/hp-hr for NO<sub>x</sub>, 0.01 g/hp-hr for PM, 15.5 g/hp-hr for CO, and 0.14 g/hp-hr for NMHC.<sup>4</sup> The emission standards are evaluated over a transient cycle, the Heavy-Duty Federal Test Procedure (HD Engine FTP) cycle, and a steady-state cycle.

To conduct a rough comparison of the emissions over a transient cycle to the engine emissions standards, we calculated the estimated NO<sub>x</sub>, PM, CO, and NMHC emissions in grams per horsepower-hour using the conversion rates shown in Table 11. The comparison was limited to the chassis test results from the UDDS cycle because this is the vehicle cycle that was used originally to create the HD Engine FTP cycle. As shown in Table 12 and Table 13, the estimated NO<sub>x</sub> and PM emissions results are significantly higher than the model year 2010 and later on-highway heavy-duty diesel emission standards, and are more typical of the emission results expected from an on-highway heavy-duty diesel engine built between model years 1998 and 2002.

**Table 12: Estimated Grams of NO<sub>x</sub> and NMHC per Horsepower-Hour Results over the UDDS Cycle for 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2**

UDDS		NO <sub>x</sub>			Non-Methane Hydrocarbons (NMHC)		
Vehicle Test Weight (lbs)	Vehicle	Cold UDDS (g/hp-hr)	Inter. UDDS (g/hp-hr)	Hot UDDS (g/hp-hr)	Cold UDDS (g/hp-hr)	Inter. UDDS (g/hp-hr)	Hot UDDS (g/hp-hr)
60,000	Glider #1	8.15	5.93	5.87	0.125	0.128	0.133
	Glider #2	9.27	7.15	6.74	0.175	0.111	0.114
80,000	Glider #1	7.27	5.56	5.44	0.086	0.086	0.088
	Glider #2	7.97	6.63	6.34	0.048	0.013	0.015

<sup>4</sup> See 40 CFR 86.007-11 for emission standards and supplemental requirements for 2007 and later model year diesel heavy-duty engines and vehicles.

**Table 13: Estimated Grams of CO and PM per Horsepower-Hour Results over the UDDS Cycle for 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2**

UDDS		Carbon Monoxide (CO)			Particulate Matter		
Vehicle Test Weight (lbs)	Vehicle	Cold UDDS (g/hp-hr)	Inter. UDDS (g/hp-hr)	Hot UDDS (g/hp-hr)	Cold UDDS (g/hp-hr)	Inter. UDDS (g/hp-hr)	Hot UDDS (g/hp-hr)
60,000	Glider #1	3.98	3.20	3.15	0.146	0.166	0.176
	Glider #2	3.52	3.19	3.10	0.100	0.106	0.106
80,000	Glider #1	3.52	3.17	2.99	0.217	0.228	0.216
	Glider #2	3.06	3.00	3.00	0.089	0.088	0.086

Chassis testing of Glider #2 was also conducted to simulate the engine-based steady state cycle, the Supplemental Emission Test (SET), as discussed in Section 2.4. The simulation was conducted by running a series of steady-state cycles with varying grade using the mass and road load coefficients of the 80,000 pound vehicle. The engine power for each SET test point was determined using the method defined in Section 3.3 and the corresponding speed and torque values are shown in Table 14.

**Table 14: Engine Speed and Torque at SET Test Points**

Test Point	Engine Speed (rpm)	Engine Torque (Nm)
A100	1262	2302
A75	1262	1783
A50	1263	1251
A25	1262	716
B100	1440	2371
B75	1440	1831
B50	1440	1289
B25	1440	732
C100	1610	2255
C75	1648	1764
C50	1648	1249
C25	1648	722
Idle	600	0

The overall emission test results from the SET are shown in Table 15. For the “idle” test point of the SET, the idle results from the 3<sup>rd</sup> phase of the Super Cycle were used. The NO<sub>x</sub> emissions are consistent with the results of the UDDS but the CO and PM emissions are measurably lower. This is not surprising since the transient CO and PM emissions are likely a result of poor air fuel ratio control and mixing during transient operation when compared to the steady-state operation that the SET captures.

**Table 15: Glider #2 Simulated SET Results**

Test Point	THC (g/hp-hr)	CO (g/hp-hr)	NOx (g/hp-hr)	N2O (g/hp-hr)	CH4 (g/hp-hr)	NMHC (g/hp-hr)	PM (g/hp-hr)
A100	0.0382	1.3560	6.817	0.00166	0	0.0399	0.028
A75	0.0343	0.8307	6.540	0.00177	0.00030	0.0355	0.016
A50	0.0320	0.5130	6.369	0.00205	0	0.0338	0.017
A25	0.0578	0.3805	6.001	0.00285	0	0.0607	0.019
B100	0.0375	0.7036	6.996	0.00180	0	0.0395	0.027
B75	0.0359	0.4510	7.379	0.00193	0.0002	0.0380	0.017
B50	0.0333	0.3316	6.880	0.00215	0	0.0351	0.015
B25	0.0569	0.3850	5.733	0.00296	0	0.0599	0.024
C100	0.0361	0.3926	6.020	0.00211	0	0.0385	0.040
C75	0.0394	0.2950	7.236	0.00226	0	0.0420	0.028
C50	0.0405	0.2648	6.594	0.00254	0	0.0427	0.024
C25	0.0635	0.3939	5.997	0.00340	0	0.0666	0.031
Idle*	5.002	23.72	113.5	0.0690	0.018	5.0127	0.175
Weighted 40 CFR 86.1362	0.0446	0.6182	6.73	0.00219	7.53E-05	0.0467	0.025
*Idle emissions are in (grams/hr)							

#### 4. Comparison to other HD Vehicle Emission Performance

The emission results from the glider vehicles were compared to two other recent model year tractors. The vehicle specifics of these two other tractors are listed below.

- The day cab tractor tested was a 2015 MY International Day Cab with over 10,000 miles. The vehicle contained a 2015 MY Cummins ISX 600 HP engine, an Eaton 13 speed automated manual transmission, and a 3.55 rear axle ratio.
- The sleeper cab tractor tested was a 2014 MY Freightliner Cascadia with 362,652 miles. The vehicle contained a 2014 MY Detroit Diesel DD-15 505 HP engine, an Eaton 10 speed manual transmission, and a 3.55 rear axle ratio.

A principle difference between these vehicles and the 2016 MY Peterbilt 389 and 2017 MY Peterbilt 579 glider vehicles are the engines. The glider vehicles use a rebuilt engine that was originally manufactured in the 1998-2002 timeframe, while the two comparison vehicles have engines certified to the 2014 MY and 2015 MY EPA emissions standards and utilize cooled exhaust gas recirculation (EGR), diesel particulate filters, and selective catalytic reduction (SCR) systems.

All of the tractors were tested in the same HD chassis dynamometer cell as the glider vehicles. The target road load coefficients for the International day cab matched the glider vehicles when tested at 60,000 pounds. The target road loads of the Freightliner sleeper cab matched the glider vehicles when tested at 80,000 pounds. This means that the comparisons reflect differences observed for the drivetrain (engine, transmission, and axle) of the vehicles, but do not account for differences associated with the vehicles' aerodynamics or tire performance. The road load coefficients for both of these vehicles are show in Table 16.

**Table 16: Road Load Coefficients**

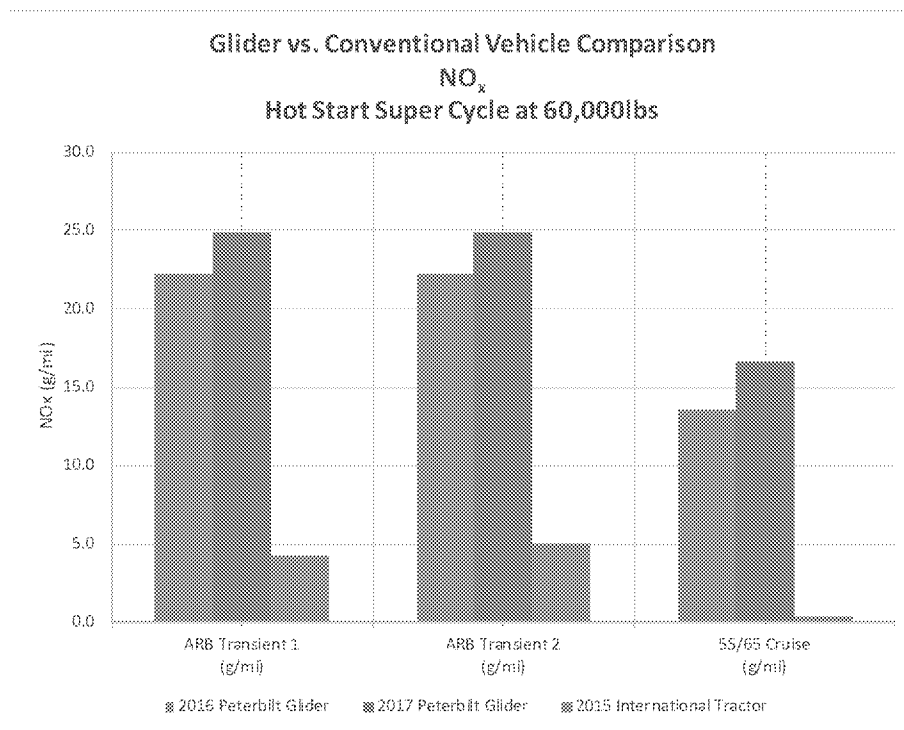
Configuration	Target Coefficients			Set Coefficients		
	A (lbf)	B (lbf/mph)	C (lbf/mph <sup>2</sup> )	A (lbf)	B (lbf/mph)	C (lbf/mph <sup>2</sup> )
2015 MY International Day Cab, 60k Test Weight	345.090	0.0000	0.15380	75.100	-0.7408	0.143200
2014 MY Freightliner Sleeper Cab, 80k Test Weight	446.350	7.76060	0.14780	294.170	6.0668	0.139900

As shown in the following figures, we compared the emission rates from the gliders to that of the comparable tractor configuration. The glider results in the figures represent the average of all of the tests for a given vehicle configuration, excluding the tests with the MIL on for Glider #1.<sup>5</sup> Figure 10 through Figure 13 compare the 2016 MY and 2017 MY Peterbilt Gliders at 60,000 pound test weight to the 2015 MY International Day Cab at the same test weight and road load coefficients over the Super Cycle. Figure 14 through Figure 17 show the emission rate differences between the 2016 MY and 2017 MY Peterbilt Gliders at 80,000 pound test weight to the 2014 MY Freightliner Sleeper Cab at the same test weight and road load coefficients over the ARB Transient Cycle.

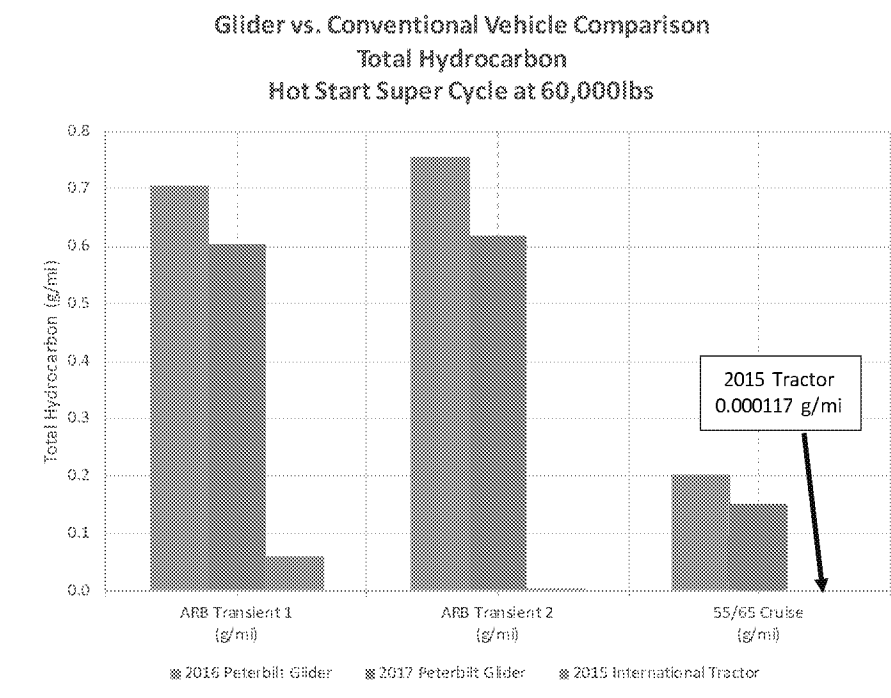
The NO<sub>x</sub>, CO, THC, and PM emissions from the glider vehicles were significantly higher than the newer model year tractors over all cycles.

<sup>5</sup> See Appendix A, B, and C for the emission rates before and after the repair.

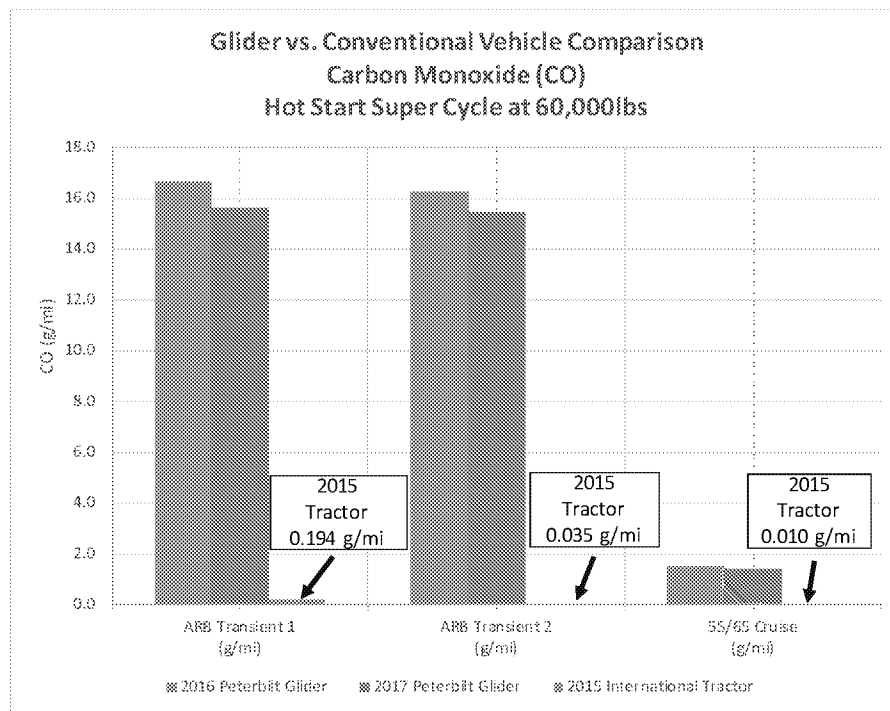




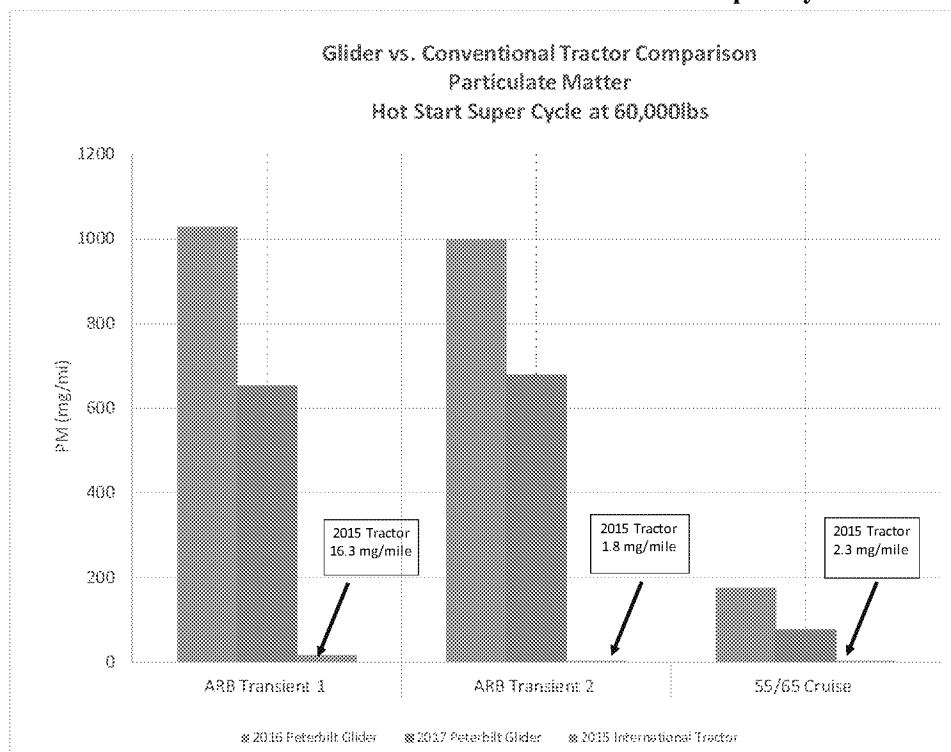
**Figure 10: NOx Emissions Comparison of 2015 MY Day Cab to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the Super Cycle**



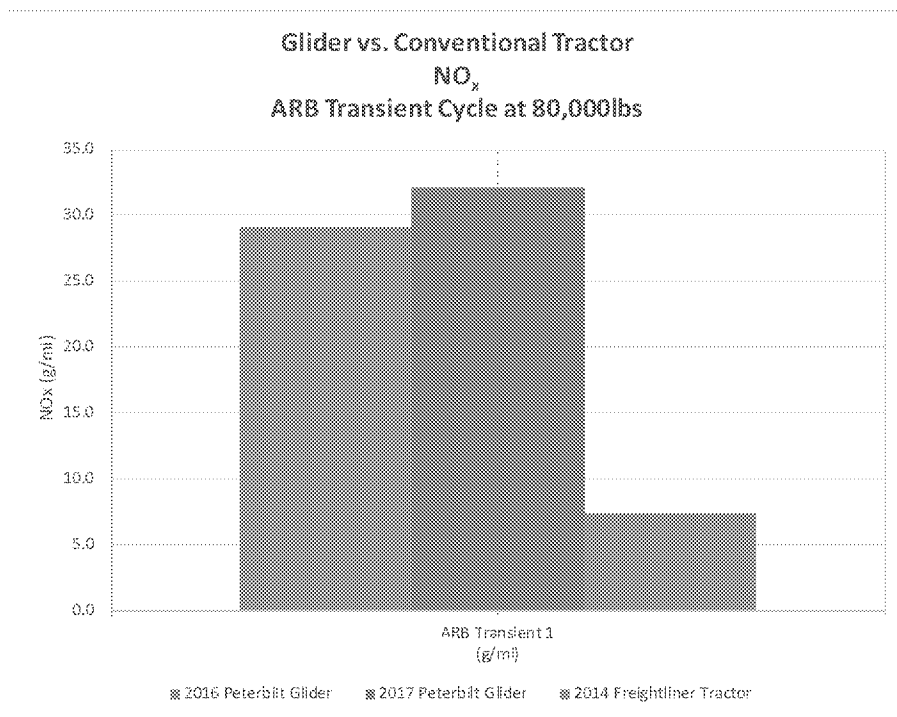
**Figure 11: THC Emissions Comparison of 2015 MY International Tractor to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the Super Cycle**



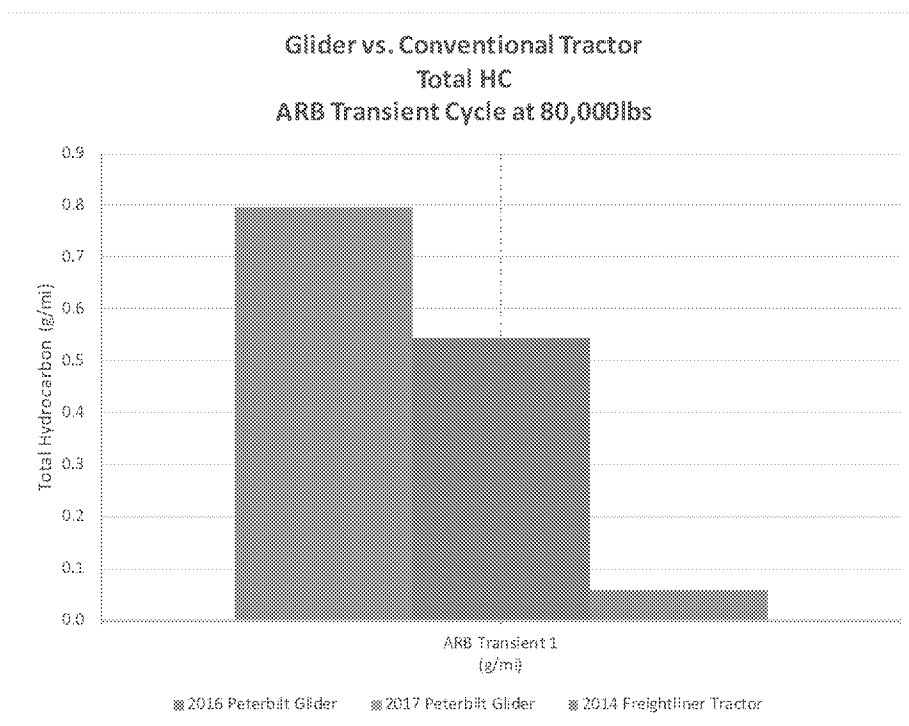
**Figure 12: CO Emissions Comparison of 2015 MY Day Cab to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the Super Cycle**



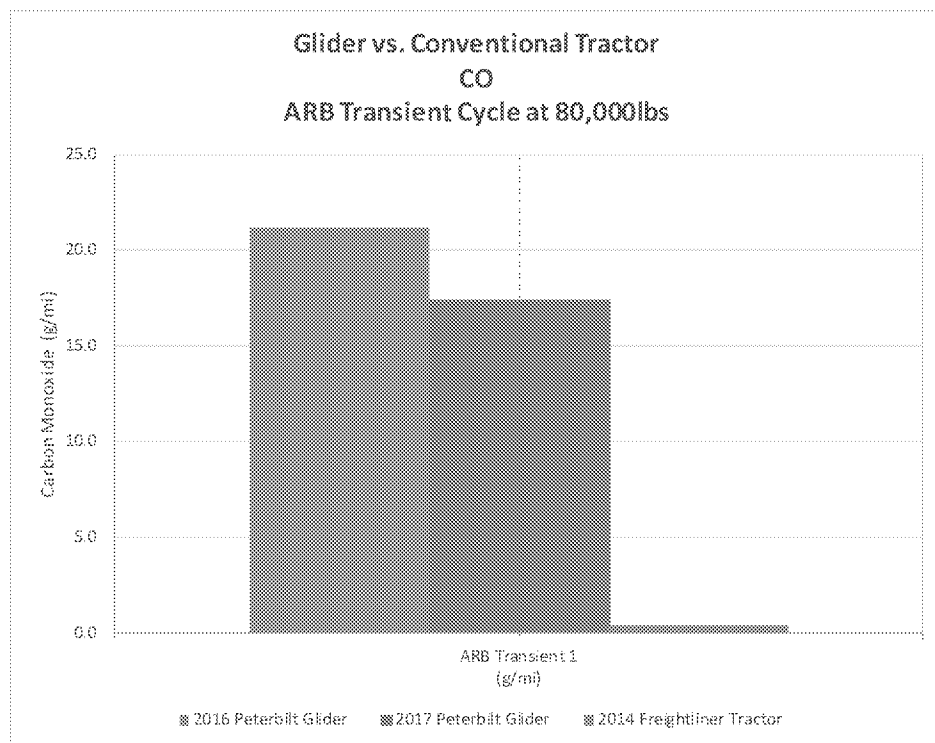
**Figure 13: PM Emissions Comparison of 2015 MY Day Cab to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the Super Cycle**



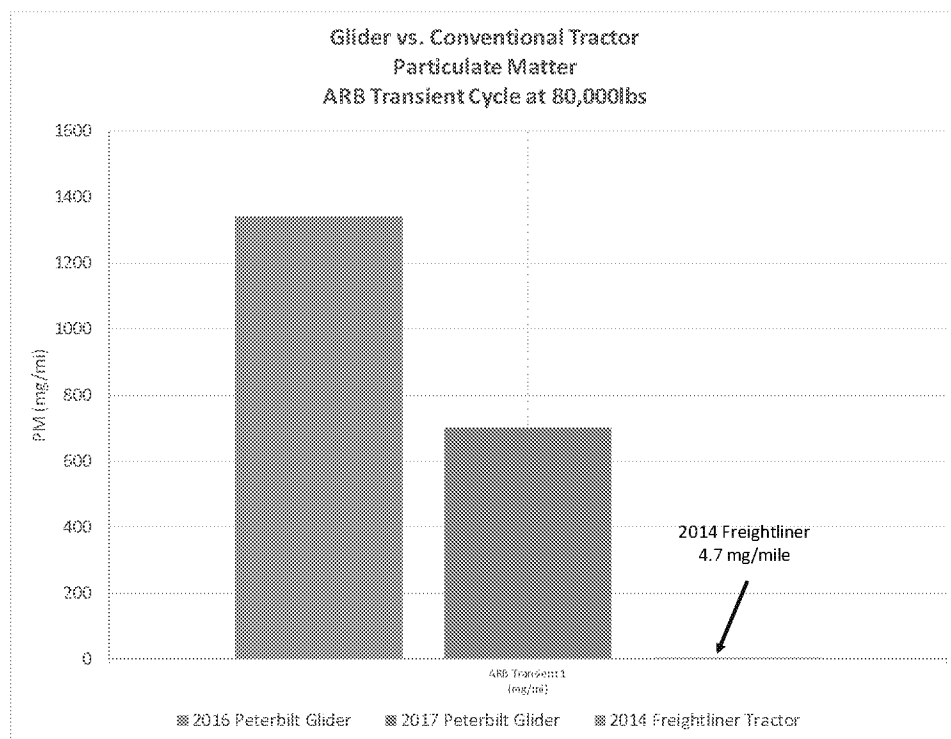
**Figure 14: NO<sub>x</sub> Emissions Comparison of 2014 MY Freightliner to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the ARB Transient Cycle**



**Figure 15: HC Emissions Comparison of 2014 MY Freightliner to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the ARB Transient Cycle**

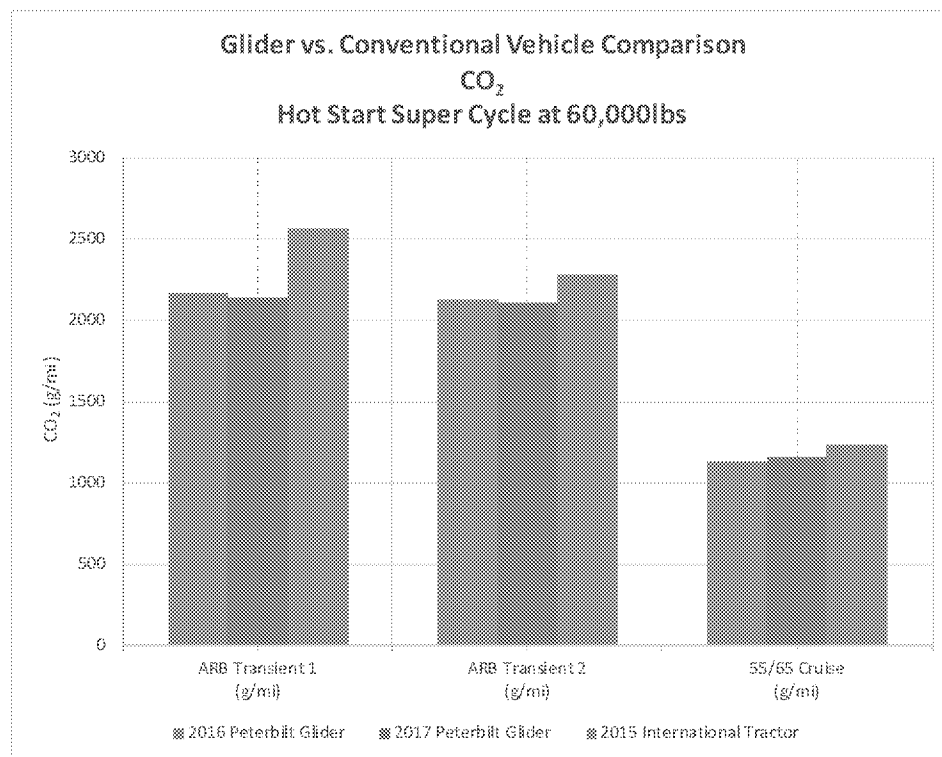


**Figure 16: CO Emissions Comparison of 2014 MY Freightliner to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the ARB Transient Cycle**

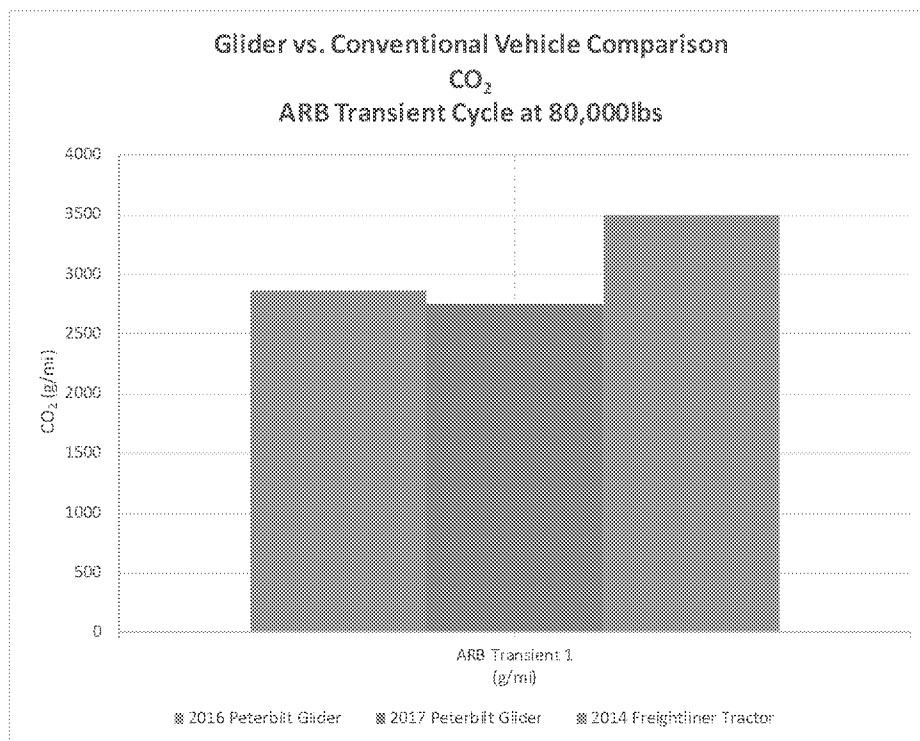


**Figure 17: PM Emissions Comparison of 2014 MY Freightliner to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the ARB Transient Cycle**

We also compared the CO<sub>2</sub> emissions of the Peterbilt 389 and Peterbilt 579 glider vehicles to the International and Freightliner conventional tractors. CO<sub>2</sub> emissions are directly proportional to the road load of the vehicle. Because we did not measure the actual road load of the vehicles, we used the same target road load coefficients in the two sets of comparisons (at 60,000 and 80,000 pounds). Therefore, this comparison only evaluates the performance of the powertrain and may not be representative of the difference in CO<sub>2</sub> emission that these vehicles would experience in-use. Figure 18 and Figure 19 show comparisons of the powertrain performance. In all cases, the CO<sub>2</sub> emissions were lower in the glider powertrains. This is not unexpected given the known trade-off between NO<sub>x</sub> and CO<sub>2</sub> emissions with respect to injection timing and similar engine calibration techniques and the relatively higher NO<sub>x</sub> emissions for the 2016 MY Peterbilt 389 and 2017 MY Peterbilt 579 glider vehicles shown in the previous tables and figures.



**Figure 18: CO<sub>2</sub> Emissions Comparison of 2015 MY International to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the Super Cycle**



**Figure 19: CO<sub>2</sub> Emissions Comparison of 2014 MY Freightliner to the 2016 MY Peterbilt 389 Glider #1 and 2017 MY Peterbilt 579 Glider #2 over the ARB Transient Cycle**

5. Appendix A  
HD UDDS Results for the Glider Vehicles

## Glider #1 2016 MY Peterbilt 389

Test Type	Vehicle Number Test Weight (lbs)	Test Number	Date	Total HC			NMHC		
				Glider #1 Cold UDDS (g/mi)	Glider #1 Inter. UDDS (g/mi)	Glider #1 Hot UDDS (g/mi)	Glider #1 Cold UDDS (g/mi)	Glider #1 Inter. UDDS (g/mi)	Glider #1 Hot UDDS (g/mi)
Cold Start UDDS	Glider #1 60,000 lb Test Wt.	1	10/6	0.630	0.664	0.487	0.561	0.606	0.491
		2	10/10	0.551	0.608	0.501	0.476	0.590	0.508
		3*	10/16	0.402	0.417	0.415	0.407	0.422	0.421
		4*	10/17	0.443	0.447	0.481	0.447	0.452	0.488
Cold Start UDDS	Glider #1 80,000 lb Test Wt.	1	10/12	0.569	0.527	0.427	0.545	0.509	0.435
		2	10/13	0.399	0.411	0.379	0.407	0.421	0.389
		3*	10/18	0.437	0.431	0.414	0.445	0.439	0.424
		4*	10/19	0.400	0.413	0.438	0.407	0.420	0.448
		* Check Engine Light issue resolved prior to this test							

Test Type	Vehicle Number Test Weight (lbs)	Test Number	Date	CH <sub>4</sub>			CO		
				Glider #1 Cold UDDS {g/mi}	Glider #1 Inter. UDDS {g/mi}	Glider #1 Hot UDDS {g/mi}	Glider #1 Cold UDDS {g/mi}	Glider #1 Inter. UDDS {g/mi}	Glider #1 Hot UDDS {g/mi}
Cold Start UDDS	Glider #1 60,000 lb Test Wt.	1	10/6	0.051	0.045	0.001	36.4	28.5	16.2
		2	10/10	0.050	0.022	0.000	36.0	23.8	14.2
		3*	10/16	0.000	0.000	0.000	13.9	11.1	10.3
		4*	10/17	0.000	0.000	0.000	13.3	10.7	11.2
Cold Start UDDS	Glider #1 80,000 lb Test Wt.	1	10/12	0.034	0.028	0.000	31.1	30.6	16.7
		2	10/13	0.002	0.000	0.000	19.7	16.1	17.4
		3*	10/18	0.000	0.000	0.000	16.1	15.2	15.4
		4*	10/19	0.000	0.000	0.000	18.9	16.3	14.4
* Check Engine Light issue resolved prior to this test									



Test Type	Vehicle Number Test Weight (lbs)	Test Number	Date	NO <sub>x</sub>			N <sub>2</sub> O		
				Glider #1 Cold UDDS (g/mi)	Glider #1 Inter. UDDS (g/mi)	Glider #1 Hot UDDS (g/mi)	Glider #1 Cold UDDS (g/mi)	Glider #1 Inter. UDDS (g/mi)	Glider #1 Hot UDDS (g/mi)
Cold Start UDDS	Glider #1 60,000 lb Test Wt.	1	10/6	33.4	31.6	24.2	0.016	0.014	0.014
		2	10/10	32.3	31.5	20.6	0.016	0.014	0.013
		3*	10/16	28.4	20.0	20.3	0.019	0.017	0.014
		4*	10/17	27.2	20.5	19.8	0.018	0.016	0.015
Cold Start UDDS	Glider #1 80,000 lb Test Wt.	1	10/12	42.5	35.1	28.1	0.020	0.021	0.018
		2	10/13	36.5	28.3	28.2	0.017	0.016	0.015
		3*	10/18	36.2	27.7	27.2	0.020	0.017	0.017
		4*	10/19	36.2	27.7	26.9	0.019	0.017	0.016
* Check Engine Light issue resolved prior to this test									

Test Type	Vehicle Number Test Weight (lbs)	Test Number	Date	CO <sub>2</sub>			Fuel Economy		
				Glider #1 Cold UDDS (g/mi)	Glider #1 Inter. UDDS (g/mi)	Glider #1 Hot UDDS (g/mi)	Glider #1 Cold UDDS (mpg)	Glider #1 Inter. UDDS (mpg)	Glider #1 Hot UDDS (mpg)
Cold Start UDDS	Glider #1 60,000 lb Test Wt.	1	10/6	2002	1838	1807	4.94	5.40	5.55
		2	10/10	2066	1881	1854	4.79	5.30	5.42
		3*	10/16	1990	1818	1779	5.05	5.54	5.67
		4*	10/17	1991	1804	1816	5.05	5.58	5.54
Cold Start UDDS	Glider #1 80,000 lb Test Wt.	1	10/12	2595	2493	2447	3.85	4.00	4.11
		2	10/13	2664	2425	2413	3.77	4.15	4.17
		3*	10/18	2602	2465	2449	3.87	4.09	4.11
		4*	10/19	2677	2478	2432	3.76	4.06	4.14
* Check Engine Light issue resolved prior to this test									

## Glider #2 2017 MY Peterbilt 579

Test Type	Vehicle Number Test Weight (lbs)	Test Number	Date	Total HC			NMHC		
				Glider #2 Cold UDDS (g/mi)	Glider #2 Inter. UDDS (g/mi)	Glider #2 Hot UDDS (g/mi)	Glider #2 Cold UDDS (g/mi)	Glider #2 Inter. UDDS (g/mi)	Glider #2 Hot UDDS (g/mi)
Cold Start UDDS	Glider #2 60,000 lb Test	1	11/3	0.603	0.363	0.377	0.605	0.370	0.384
		2	11/6	0.621	0.401	0.405	0.621	0.406	0.411
Cold Start UDDS	Glider #2 80,000 lb Test	1	11/7	0.236	0.056	0.064	0.241	0.063	0.073

Test Type	Vehicle Number Test Weight (lbs)	Test Number	Date	CH <sub>4</sub>			CO		
				Glider #2 Cold UDDS (g/mi)	Glider #2 Inter. UDDS (g/mi)	Glider #2 Hot UDDS (g/mi)	Glider #2 Cold UDDS (g/mi)	Glider #2 Inter. UDDS (g/mi)	Glider #2 Hot UDDS (g/mi)
Cold Start UDDS	Glider #2 60,000 lb Test	1	11/3	0.004	0.000	0.000	11.4	11.1	9.4
		2	11/6	0.005	0.000	0.000	13.2	11.2	12.3
Cold Start UDDS	Glider #2 80,000 lb Test	1	11/7	0.006	0.000	0.000	15.5	15.1	15.2

Test Type	Vehicle Number Test Weight (lbs)	Test Number	Date	NO <sub>x</sub>			N <sub>2</sub> O		
				Glider #2 Cold UDDS (g/mi)	Glider #2 Inter. UDDS (g/mi)	Glider #2 Hot UDDS (g/mi)	Glider #2 Cold UDDS (g/mi)	Glider #2 Inter. UDDS (g/mi)	Glider #2 Hot UDDS (g/mi)
Cold Start UDDS	Glider #2 60,000 lb Test	1	11/3	32.8	25.3	23.5	0.018	0.022	0.013
		2	11/6	32.0	24.7	23.6	0.014	0.010	0.010
Cold Start UDDS	Glider #2 80,000 lb Test	1	11/7	40.3	33.5	32.0	0.013	0.010	0.010

Test Type	Vehicle Number Test Weight (lbs)	Test Number	Date	CO <sub>2</sub>			Fuel Economy		
				Glider #2 Cold UDDS (g/mi)	Glider #2 Inter. UDDS (g/mi)	Glider #2 Hot UDDS (g/mi)	Glider #2 Cold UDDS (mpg)	Glider #2 Inter. UDDS (mpg)	Glider #2 Hot UDDS (mpg)
Cold Start UDDS	Glider #2 60,000 lb Test	1	11/3	1962	1868	1801	5.13	5.39	5.60
		2	11/6	2035	1855	1856	4.95	5.43	5.42
Cold Start UDDS	Glider #2 80,000 lb Test	1	11/7	2640	2493	2460	3.82	4.04	4.10

## PM Results

The values in the table represent an average of the PM collected on three filters. The PM emission data was not collected for all tests due to power issues in the laboratory during the time of testing which affected the PM sampler. Those tests for which the PM sample system was not operating are indicated with a “N/A”.

Test Type	Vehicle Test Weight (lbs)	Test Number	Date	PM		
				Cold UDDS (mg/mi)	Inter. UDDS (mg/mi)	Hot UDDS (mg/mi)
Cold Start UDDS	Glider #1 60,000 lb	1	10/6	1472	1491	813
		2	10/10	N/A	N/A	N/A
		3*	10/16	479	580	542
		4*	10/17	521	554	662
	Glider #2 60,000 lb	1	11/3	323	363	310
		2	11/6	375	379	431
		3	11/14	N/A	N/A	N/A
Cold Start UDDS	Glider#1 80,000 lb	1	10/12	1419	1622	916
		2*	10/13	706	706	674
		3*	10/18	N/A	N/A	N/A
		4*	10/19	778	849	800
	Glider #2 80,000 lb	1	11/7	490	473	466
		2	11/8	413	433	402
		3	11/13	450	427	432
* Check Engine Light issue resolved prior to these tests						

## 6. Appendix B

### World Harmonized Vehicle Cycle (WHVC) Results for the Glider Vehicles

## Glider #1 2016 MY Peterbilt 389

Test Type	Vehicle Number Test Weight (lbs)	Test Number	Date	Total HC (g/mi)	NMOG (g/mi)	NMHC (g/mi)	CH4 (g/mi)	CO (g/mi)	Nox (g/mi)	N2O (g/mi)	CO2 (g/mi)	Fuel Economy (mpg)
Hot Start WHVC	Glider #1 60,000 lb Test Wt.	1	10/5	0.431	0.435	0.435	0.000	8.65	17.3	0.0123	1505	6.69
		2	10/6	0.391	0.397	0.397	0.000	10.21	16.9	0.0109	1561	6.45
		3	10/10	0.410	0.397	0.397	0.004	16.82	25.4	0.0099	1506	6.63
		4*	10/16	0.373	0.377	0.377	0.000	8.94	16.8	0.0128	1560	6.46
		5*	10/17	0.392	0.395	0.395	0.000	9.55	16.8	0.0130	1577	6.38
Hot Start WHVC	Glider #1 80,000 lb Test	1	10/11	0.332	0.336	0.336	0.000	13.14	24.2	0.0128	2105	4.78
		2*	10/13	0.347	0.350	0.350	0.000	14.70	22.7	0.0145	2132	4.72

## Glider #2 2017 MY Peterbilt 579

Test Type	Vehicle Number Test Weight (lbs)	Test Number	Date	Total HC (g/mi)	NMOG (g/mi)	NMHC (g/mi)	CH4 (g/mi)	CO (g/mi)	Nox (g/mi)	N2O (g/mi)	CO2 (g/mi)	Fuel Economy (mpg)
Hot Start WHVC	Glider #2 60,000 lb Test	1	11/3	0.285	0.288	0.288	0.000	8.79	20.0	0.0068	1553	6.49
		2	11/6	0.289	0.291	0.291	0.000	9.12	20.2	0.0076	1552	6.49
Hot Start WHVC	Glider #2 80,000 lb Test	1	11/7	0.298	0.300	0.300	0.000	12.85	26.4	0.0082	2157	4.67
		2	11/8	0.313	0.316	0.316	0.000	10.87	27.1	0.0101	2152	4.69

## PM Results

The values in the table represent an average of the PM collected on three filters. The PM emission data was not collected for all tests due to power issues in the laboratory during the time of testing which affected the PM sampler. Those tests for which the PM sample system was not operating are indicated with a “N/A”.

Test Type	Vehicle Test Weight (lbs)	Test Number	Date	PM
				WHVC (mg/mi)
Hot Start WHVC	Glider #1 60,000 lb	1	10/5	543
		2	10/6	622
		3	10/10	N/A
		4*	10/16	530
		5*	10/17	591
	Glider #2 60,000 lb	1	11/3	367
		2	11/6	331
Hot Start WHVC	Glider #1 80,000 lb	1	10/11	627
		2*	10/13	745
Hot Start WHVC	Glider #2 80,000 lb	1	11/7	433
		2	11/8	419

\* Check Engine Light issue resolved prior to these tests

7. Appendix C  
Super Cycle (SC) Results for the Glider Vehicles

## Glider #1 2016 MY Peterbilt 389

Test Type	Vehicle Number Test Weight (lbs)	Test Number	Date	Total HC			NMHC		
				Glider #1 ARB	Glider #1 ARB	Glider #1 55/65	Glider #1 ARB	Glider #1 ARB	Glider #1 55/65
				Transient 1 (g/mi)	Transient 2 (g/mi)	Cruise (g/mi)	Transient 1 (g/mi)	Transient 2 (g/mi)	Cruise (g/mi)
Hot Start SC	Glider #1 60,000 lb Test Wt.	1	10/5	0.822	0.753	0.207	0.823	0.756	0.214
		2	10/6	0.611	0.723	0.201	0.611	0.726	0.208
		3	10/10	0.794	0.740	0.201	0.765	0.742	0.208
		4*	10/16	0.683	0.753	0.197	0.682	0.757	0.204
		5*	10/17	0.727	0.758	0.207	0.727	0.762	0.214
Hot Start SC	Glider #1 80,000 lb Test Wt.	1	10/11	0.608	0.648	0.168	0.609	0.653	0.178
		2	10/13	0.629	0.701	0.185	0.631	0.707	0.195
		3*	10/18	0.798	0.706	0.199	0.799	0.713	0.209
		* Check Engine Light issue resolved prior to this test							

Test Type	Vehicle Number Test Weight (lbs)	Test Number	Date	CH <sub>4</sub>			CO		
				Glider #1 ARB Transient 1	Glider #1 ARB Transient 2	Glider #1 55/65 Cruise	Glider #1 ARB Transient 1	Glider #1 ARB Transient 2	Glider #1 55/65 Cruise
				(g/mi)	(g/mi)	(g/mi)	(g/mi)	(g/mi)	(g/mi)
Hot Start SC	Glider #1 60,000 lb Test Wt.	1	10/5	0.000	0.000	0.000	16.20	18.45	1.69
		2	10/6	0.000	0.000	0.000	20.12	21.34	1.76
		3	10/10	0.022	0.002	0.000	38.94	20.84	1.86
		4*	10/16	0.000	0.000	0.000	16.13	15.01	1.50
		5*	10/17	0.000	0.003	0.000	17.23	17.49	1.61
Hot Start SC	Glider #1 80,000 lb Test Wt.	1	10/11	0.000	0.000	0.000	22.84	24.34	2.99
		2	10/13	0.000	0.000	0.001	22.43	22.15	2.70
		3*	10/18	0.000	0.000	0.002	21.15	20.05	2.58
* Check Engine Light issue resolved prior to this test									

Test Type	Vehicle Number Test Weight (lbs)	Test Number	Date	NO <sub>x</sub>			N <sub>2</sub> O		
				Glider #1 ARB	Glider #1 ARB	Glider #1 55/65	Glider #1 ARB	Glider #1 ARB	Glider #1 55/65
				Transient 1 (g/mi)	Transient 2 (g/mi)	Cruise (g/mi)	Transient 1 (g/mi)	Transient 2 (g/mi)	Cruise (g/mi)
Hot Start SC	Glider #1 60,000 lb Test Wt.	1	10/5	24.4	23.8	13.3	0.016	0.014	0.005
		2	10/6	23.2	23.3	13.4	0.015	0.016	0.006
		3	10/10	35.5	26.6	13.4	0.020	0.018	0.008
		4*	10/16	22.0	22.4	13.6	0.020	0.020	0.008
		5*	10/17	22.5	22.2	13.5	0.021	0.019	0.008
Hot Start SC	Glider #1 80,000 lb Test Wt.	1	10/11	29.6	30.1	25.3	0.022	0.020	0.009
		2	10/13	29.2	28.8	25.2	0.023	0.023	0.010
		3*	10/18	29.1	28.6	25.2	0.023	0.021	0.010
* Check Engine Light issue resolved prior to this test									



Test Type	Vehicle Number Test Weight (lbs)	Test Number	Date	CO <sub>2</sub>			Fuel Economy		
				Glider #1 ARB Transient 1 (g/mi)	Glider #1 ARB Transient 2 (g/mi)	Glider #1 55/65 Cruise (g/mi)	Glider #1 ARB Transient 1 (g/mi)	Glider #1 ARB Transient 2 (g/mi)	Glider #1 55/65 Cruise (g/mi)
Hot Start SC	Glider #1 60,000 lb Test Wt.	1	10/5	2188	2181	1121	4.59	4.60	9.05
		2	10/6	2158	2172	1141	4.64	4.61	8.90
		3	10/10	2172	2104	1139	4.55	4.76	8.90
		4*	10/16	2138	2110	1132	4.70	4.76	8.97
		5*	10/17	2200	2146	1134	4.57	4.68	8.95
Hot Start SC	Glider #1 80,000 lb Test Wt.	1	10/11	2814	2827	1750	3.57	3.55	5.80
		2	10/13	2843	2817	1757	3.53	3.57	5.77
		3*	10/18	2863	2783	1749	3.51	3.61	5.80
	* Check Engine Light issue resolved prior to this test.								

## Glider #2 2017 MY Peterbilt 579

Test Type	Vehicle Number Test Weight (lbs)	Test Number	Date	Total HC			NMHC		
				Glider #2 ARB Transient 1 (g/mi)	Glider #2 ARB Transient 2 (g/mi)	Glider #2 55/65 Cruise (g/mi)	Glider #2 ARB Transient 1 (g/mi)	Glider #2 ARB Transient 2 (g/mi)	Glider #2 55/65 Cruise (g/mi)
Hot Start SC	Glider #2 60,000 lb Test	1	11/3	0.611	0.610	0.164	0.611	0.612	0.171
		2	11/6	0.596	0.626	0.137	0.595	0.628	0.143
Hot Start SC	Glider #2 80,000 lb Test	1	11/7	0.544	0.596	0.162	0.547	0.605	0.170
		2	11/8	0.578	0.601	0.180	0.579	0.609	0.189

Test Type	Vehicle Number Test Weight (lbs)	Test Number	Date	CH <sub>4</sub>			CO		
				Glider #2 ARB Transient 1 (g/mi)	Glider #2 ARB Transient 2 (g/mi)	Glider #2 55/65 Cruise (g/mi)	Glider #2 ARB Transient 1 (g/mi)	Glider #2 ARB Transient 2 (g/mi)	Glider #2 55/65 Cruise (g/mi)
Hot Start SC	Glider #2 60,000 lb Test	1	11/3	0.000	0.001	0.000	15.32	16.00	1.49
		2	11/6	0.000	0.001	0.001	15.90	14.96	1.34
Hot Start SC	Glider #2 80,000 lb Test	1	11/7	0.000	0.000	0.003	17.41	18.31	2.70
		2	11/8	0.000	0.000	0.003	18.73	18.84	2.14

Test Type	Vehicle Number Test Weight (lbs)	Test Number	Date	NO <sub>x</sub>			N <sub>2</sub> O		
				Glider #2 ARB Transient 1 (g/mi)	Glider #2 ARB Transient 2 (g/mi)	Glider #2 55/65 Cruise (g/mi)	Glider #2 ARB Transient 1 (g/mi)	Glider #2 ARB Transient 2 (g/mi)	Glider #2 55/65 Cruise (g/mi)
Hot Start SC	Glider #2 60,000 lb Test	1	11/3	25.0	25.0	16.4	0.014	0.013	0.005
		2	11/6	24.9	24.8	16.9	0.012	0.014	0.004
Hot Start SC	Glider #2 80,000 lb Test	1	11/7	32.1	32.7	28.6	0.015	0.013	0.005
		2	11/8	33.0	32.7	28.6	0.017	0.016	0.007

Test Type	Vehicle Number Test Weight (lbs)	Test Number	Date	CO <sub>2</sub>			Fuel Economy		
				Glider #2 ARB Transient 1 (g/mi)	Glider #2 ARB Transient 2 (g/mi)	Glider #2 55/65 Cruise (g/mi)	Glider #2 ARB Transient 1 (g/mi)	Glider #2 ARB Transient 2 (g/mi)	Glider #2 55/65 Cruise (g/mi)
Hot Start SC	Glider #2 60,000 lb Test	1	11/3	2177	2117	1171	4.62	4.75	8.67
		2	11/6	2106	2105	1146	4.77	4.78	8.86
Hot Start SC	Glider #2 80,000 lb Test	1	11/7	2755	2760	1765	3.66	3.65	5.75
		2	11/8	2861	2796	1777	3.52	3.60	5.71

## PM Results

The values in the table represent an average of the PM collected on three filters. The PM emission data was not collected for all tests due to power issues in the laboratory during the time of testing which affected the PM sampler. Those tests for which the PM sample system was not operating are indicated with a "N/A".

Test Type	Vehicle Test Weight (lbs)	Test Number	Date	PM		
				ARB Transient 1 (mg/mi)	ARB Transient 2 (mg/mi)	55/65 Cruise (mg/mi)
Hot Start SC*	Glider #1 60,000 lb	1	10/5	1005	839	187
		2	10/6	1112	1127	187
		3	10/10	N/A	N/A	N/A
		4*	10/16	961	905	167
		5*	10/17	1094	1089	186
	Glider #2 60,000 lb	1	11/3	682	706	88
		2	11/6	623	648	69
Hot Start SC*	Glider #1 80,000 lb	1	10/11	N/A	N/A	N/A
		2*	10/13	1340	1288	169
		3*	10/18	N/A	N/A	N/A
	Glider #2 80,000 lb	1	11/7	652	668	83
		2	11/8	749	743	98
* Check Engine Light issue resolved prior to these tests						

Message

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**From:** Wehrum, Bill [Wehrum.Bill@epa.gov]  
**Sent:** 2/6/2018 10:59:13 PM  
**To:** Lewis, Josh [Lewis.Josh@epa.gov]; Atkinson, Emily [Atkinson.Emily@epa.gov]  
**CC:** Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]  
**Subject:** FW: Bill, We'd like to chat with you

Meeting request ...

---

Bill Wehrum  
Assistant Administrator  
Office of Air and Radiation  
U.S. Environmental Protection Agency  
(202) 564-7404

---

**From:** Myron Ebell [mailto:Myron.Ebell@cei.org]  
**Sent:** Tuesday, February 6, 2018 5:53 PM  
**To:** Wehrum, Bill <Wehrum.Bill@epa.gov>  
**Subject:** Bill, We'd like to chat with you

Dear Bill, Steve Milloy and I (and perhaps Marlo Lewis) would like to come chat with you about a couple issues related to the use or rather misuse of science in the Clean Air Act regulatory process. We know you're swamped, so won't take a lot of your time. Yours, Myron.

Myron Ebell  
Director, Center for Energy and Environment  
Competitive Enterprise Institute  
1310 L Street, N. W., Seventh Floor  
Washington, DC 20005, USA  
Tel direct: Ex. 6 Personal Privacy (PP)  
Tel mobile: Ex. 6 Personal Privacy (PP)  
E-mail: [Myron.Ebell@cei.org](mailto:Myron.Ebell@cei.org)  
*Stop continental drift!*

**From:** Steve Milloy [Ex. 6 Personal Privacy (PP)]  
**Sent:** 7/5/2017 2:28:40 PM  
**To:** Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]  
**Subject:** Fwd: Request for Retraction of NEJM articles (Date Corrected Final)

FYI. Steve

Begin forwarded message:

**From:** Steve Milloy [Ex. 6 Personal Privacy (PP)]  
**Subject:** Request for Retraction of NEJM articles (Date Corrected Final)  
**Date:** July 5, 2017 at 10:07:31 AM EDT  
**To:** [jdrazen@nejm.org](mailto:jdrazen@nejm.org)  
**Cc:** [ecampion@nejm.org](mailto:ecampion@nejm.org), [mhamel@nejm.org](mailto:mhamel@nejm.org), [president@massmed.org](mailto:president@massmed.org), [p-elect@massmed.org](mailto:p-elect@massmed.org), [mmsvp@massmed.org](mailto:mmsvp@massmed.org), [ssa16@columbia.edu](mailto:ssa16@columbia.edu), [db@cmwf.org](mailto:db@cmwf.org), [me42v@nih.gov](mailto:me42v@nih.gov), [farrar@wellcome.ac.uk](mailto:farrar@wellcome.ac.uk), [harvey.fineberg@moore.org](mailto:harvey.fineberg@moore.org), [thomas.lee@pressganey.com](mailto:thomas.lee@pressganey.com), [jlieberman@columbia.edu](mailto:jlieberman@columbia.edu), [john.mcmurray@glasgow.ac.uk](mailto:john.mcmurray@glasgow.ac.uk), [trevor.mundel@gatesfoundation.org](mailto:trevor.mundel@gatesfoundation.org)

July 5, 2017

Dr. Jeffrey M. Drazen  
Editor-in-Chief  
The New England Journal of Medicine  
10 Shattuck Street  
Boston, MA 02115-6094

Re: Request for Retraction of NEJM Articles "Air Pollution and Mortality in the Medicare Population" and "Air Pollution Still Kills"

Dear Dr. Drazen,

I am writing to request that the *New England Journal of Medicine* retract the study entitled, "Air Pollution and Mortality in the Medicare Population" (NEJM Study) and the accompanying editorial "Air Pollution Still Kills" (NEJM Editorial), both of which appear in the June 29, 2017 issue. The basis for this request is scientific misconduct on the part of the study authors and editors.

**I. The NEJM Study Authors Omitted Significant/Material Contradictory Information.**

The NEJM Study omits material information and data that contradict the its conclusions. The NEJM editorial is, then, the fruit of this poisonous tree.

Specifically, there is no mention of the existence of the contradictory findings of other high quality PM2.5/mortality epidemiologic studies despite knowledge by the authors/editors of their existence. Just some examples of recent significant contradictory findings include the following (Citation/Excerpt from Abstract/Comment):

- **Young S et al. Air Quality and Acute Deaths in California. Regul Toxicol Pharmacol.** <https://doi.org/10.1016/j.yrtph.2017.06.003>. (In press, online June 13, 2017). “Neither PM2.5 nor ozone added appreciably to the prediction of daily deaths. These results call into question the widespread belief that association between air quality and acute deaths is causal/near-universal.” Although this study became available at Regulatory Toxicology and Pharmacology in June 2017, it was first made available on Cornell University’s [arXiv.org](https://arxiv.org/abs/1502.03062) web site on February 10, 2015 (<https://arxiv.org/abs/1502.03062>) and was presented at a poster session at the 2016 annual meeting of the Health Effects Institute (HEI). As you know, HEI is one of the funders of the NEJM study.
- **Enstrom J. Fine Particulate Matter and Total Mortality in Cancer Prevention Study Cohort Reanalysis. Dose-Response.** <http://journals.sagepub.com/doi/10.1177/1559325817693345>. (Published March 28, 2017). “No significant relationship between PM2.5 and total mortality in the CPS II cohort was found when the best available PM2.5 data were used.” Not only was this study published three months ahead of the NEJM study but you personally rejected the study for publication in the NEJM on June 28, 2016.
- **Greven S et al. An Approach to the Estimation of Chronic Air Pollution Effects Using Spatio-Temporal Information. Journal of the American Statistical Association.** <http://amstat.tandfonline.com/doi/abs/10.1198/jasa.2011.ap09392> (Published January 12, 2012). “[W]e are not able to demonstrate any change in life expectancy for a reduction in PM2.5.” One of the co-authors of this study, Francesca Dominici, is also a co-author on the NEJM study.

Please note that NEJM Study funder HEI, NEJM Study author Dominici and yourself as NEJM editor-in-chief are aware of these contradictory findings, yet there is no mention or allusion to them in the NEJM Study or NEJM Editorial.

## **II. Omission of Material Information Is Scientific Misconduct.**

According to the standards for scientific misconduct applicable to studies funded by the Department of Health and Human Services established in 42 CFR Part 93 – Public Health Service Policies On Research Misconduct, “research misconduct” means:

*... fabrication, falsification, or plagiarism in proposing, performing or reviewing research or in reporting research results.*

*(a) Fabrication is making up data or results and recording or reporting them.*

*(b) Falsification is manipulation research materials, equipment or processes or changing or omitting data or results such that the research is not accurately represented in the research record. [Emphasis added]*

*(c) Plagiarism is the appropriation of another person’s ideas, processes, results or words without giving appropriate credit.*

## **III. The NEJM Study Omitted Key Information In Violation of Federal Rules.**

Albert Einstein is credited with the observation that:

*No amount of experimentation can ever prove me*

*right; a single experiment can prove me wrong.*

Regardless of the source of the quote, the thrust of the comment is axiomatic to science. It applies to the NEJM Study as follows: If PM2.5 kills, then it kills everywhere, in the same way, and all the time, and every study result should either be consistent with that hypothesis or be explained away as flawed or faulty.

There are many studies that fail to associate PM2.5 with death – e.g., the three studies cited above. But the NEJM Study and NEJM Editorial fail to mention or even allude to the existence of this contradictory evidence, let alone explain it away.

Omitting to even mention the existence of contradictory results is a clear misrepresentation of the research record. Worse, this misrepresentation can only be viewed as intentional as the existence of contradictory results are provably known to the NEJM Study funder, authors and you, co-author of the NEJM Editorial. Most likely, the existence of these contradictory studies is known by the NEJM Study reviewers. There is no reasonable excuse for the omissions.

Although omission of the aforementioned significant contradictory evidence constitutes scientific misconduct on its own, there were other material omissions as well.

As every epidemiologist knows, epidemiology is merely statistical in nature and statistics cannot establish causation by themselves. As the U.S. Environmental Protection Agency, which is responsible for regulating PM2.5 in outdoor air, acknowledged to a federal court in litigation involving PM2.5:

*[E]pidemiological studies do not generally provide direct evidence of causation; instead they indicate the existence or absence of a statistical relationship. Large population studies cannot assess the biological mechanisms that could explain how inhaling [PM2.5] can cause illness or death in susceptible individuals.*

To assess the “biological mechanisms” that could explain how inhaling PM2.5 could cause death or illness, animal toxicology or human clinical research is necessary. But none of the extant PM2.5 animal toxicology, human medical research or human clinical research studies supports the hypothesis that PM2.5 kills. In short, there is absolutely no physical evidence that supports the claim that PM2.5 kills.

In addition to the absence of biological, medical, or other physical evidence supporting the notion that PM2.5 in outdoor air kills, there is a host of real-world evidence ranging from the smoking epidemiology to the epidemiology workers with high exposure to PM2.5 (e.g., coal miners) to other high, real-world PM2.5 exposures that plainly contradict the PM2.5-kills hypothesis. In short, if PM2.5 kills hundreds of thousands of Americans per year and millions around the world, as some claim, no physical evidence of this phenomenon has ever been produced.

The NEJM study (and NEJM editorial) also rely on a statistical precision that simply doesn't exist in epidemiology because of unavoidable uncertainty surrounding the data. This is the “garbage-in, garbage-out” phenomenon.

While the NEJM Study pretends to condemn PM2.5 based on a hazard ratio on the order of 1.08, every professional epidemiologist knows that hazard ratios below the level of 2.0 are unreliable. This has been a long-held view maintained by bodies such as the National Academy of Sciences, National Cancer Institute, World Health Organization and U.S. Food and Drug

Administration. This principle was also embraced by Sir Austin Bradford Hill in his famed criteria for interpreting epidemiologic results.

The unreliable data problem is writ large in the NEJM Study as it, for example, lacks information on the cause of death for any individual in the Medicare population, relies entirely on guesstimated exposure data, and fails to consider confounding factors such as smoking, socioeconomic status and any of the other myriad potential competing risk factors for death.

All this key information is also omitted from the NEJM Study and NEJM Editorial.

#### **IV. Conclusion**

There can be little doubt that the NEJM Study and NEJM editorial omit key information that would otherwise place the reported results in accurate context. Given that the NEJM Study was federally funded, these omissions constitute scientific misconduct under federal regulations. I am requesting that the NEJM Study and NEJM Editorial be immediately retracted. The politicized nature of the NEJM Editorial, which attacks President Trump by name concerning the unrelated issued of U.S. withdrawal from the Paris climate agreement, only underscores the "political science" nature of this sordid incident.

None of this is rocket science. It is a plain question of basic scientific integrity. You have placed your publication's reputation in peril by publishing the NEJM Study and NEJM Editorial. I look forward to your prompt response. Please let me know if you require any more information.

Sincerely,

/s/

Steve Milloy  
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Potomac, MD 20854  
Tel: Ex. 6 Personal Privacy (PP)  
Cell:

cc:

Committee on Publications of the Massachusetts Medical Society  
NEJM Editors  
NEJM Editorial Board



Message

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**From:** Steve Milloy [Ex. 6 Personal Privacy (PP)]  
**Sent:** 6/29/2017 1:32:42 PM  
**To:** milloy Steve [Ex. 6 Personal Privacy (PP)]  
**Subject:** Print version of landmark California PM2.5 study  
**Attachments:** Young 2017 CA data RTP.pdf

To all... Attached please find the published print version of our California PM2.5 study (the best-conducted epidemiology study ever on PM2.5) which debunks the notion that PM2.5 in outdoor air kills. Thanks for your interest and support.

As you know, the swamp is trying to fight back and save its funding, reputation and regulatory chokehold – as evidenced by yesterday's New England Journal of Medicine study/editorial claiming "Air Pollution still kills."

I'm confident we can prevail with everyone's help.

Steve



# Air quality and acute deaths in California, 2000–2012



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## ABSTRACT

Many studies have shown an association between air quality and acute deaths, and such associations are widely interpreted as causal. Several factors call causation and even association into question, for example multiple testing and multiple modeling, publication bias and confirmation bias. Many published studies are difficult or impossible to reproduce because of lack of access to confidential data sources. Here we make publically available a dataset containing daily air quality levels, PM<sub>2.5</sub> and ozone, daily temperature levels, minimum and maximum and daily maximum relative humidity levels for the eight most populous California air basins, thirteen years, >2M deaths, over 37,000 exposure days. The data are analyzed using standard time series analysis, and a sensitivity analysis is computed varying model parameters, locations and years. Our analysis finds little evidence for association between air quality and acute deaths. These results are consistent with those for the widely cited NMMAPS dataset when the latter are restricted to California. The daily death variability was mostly explained by time of year or weather variables; Neither PM<sub>2.5</sub> nor ozone added appreciably to the prediction of daily deaths. These results call into question the widespread belief that association between air quality and acute deaths is causal/near-universal.

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## 1. Introduction

The purposes of this paper are threefold: First, we describe a data set that we make publically available that is useful for time-series analyses for air quality and acute deaths for California. Second, we provide a primary and sensitivity analyses of the data set. Third, we discuss the implications of our analysis results. We note that we are looking for association and that association, if it is present, does not prove causation.

Our first objective for the present study is to assemble a new, large dataset available for analysis by other researchers. We obtained daily counts of deaths, air quality levels for ozone and PM<sub>2.5</sub>, daily minimum and maximum temperature and daily maximum relative humidity, in the eight most populous air basins in California for the years 2000–2012. A map showing the air basins is given in Fig. 1. We give the yearly PM<sub>2.5</sub> and ozone levels for each air basin in Table 1. We obtained over two million electronic death certificates. We linked daily air quality data, ozone and PM<sub>2.5</sub>. The

US Clean Air Act has sections requiring the regulation of “criteria Pollutants.” Recent regulatory attention, e.g. Clean Power Plan, is focused on PM<sub>2.5</sub> and ozone and those air quality constituents are the focus of this paper. Air quality has improved dramatically over the last 40 years (Schwartz and Hayward (2007)), so release of an up to date data set is timely and important. We note that with the release of our data set, in particular the daily mortality, other constituents can be linked and analyzed. We examined over 37 thousand exposure days. The data are described in more detail in Section 2.

It is important to get air quality/health effects data sets public as data used in most environmental epidemiology papers is not available. Many scientific bodies, Board on Life Sciences (2003), Royal Society (2012), Office of Science and Technology Policy (2013), support open access to data used in scientific papers. In practice, there can be many obstacles both administrative and political. Cecil and Griffin (1985) note that “As an abstract principle, the sharing of research data is a noble goal and meets with little opposition. However, when data sharing is attempted in a particular circumstance, the conflicting interests of the parties can thwart the exchange.” Our experience has been that it is difficult to get public access to air quality/health effect data sets. Cecil and Griffin

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Fig. 1. Map of California air basins (Source: Webpage of the California Air Resources Board).

**Table 1**  
Yearly PM<sub>2.5</sub> and ozone levels for each air basin.

PM <sub>2.5</sub>	mountain-counties	sacramento-valley	salton-sea	san-diego	san-francisco	san-joaquin	south-central	south-coast
2000	10.89	15.21	17.45	19.98	17.76	26.93	16.88	31.48
2001	14.05	21.06	16.27	19.99	15.57	26.63	17.56	36.73
2002	14.60	22.61	25.86	18.05	17.81	36.12	13.95	33.04
2003	18.00	19.40	32.64	17.67	15.65	28.83	14.31	28.76
2004	19.48	20.37	20.42	15.93	16.84	26.34	17.19	27.36
2005	18.18	21.68	18.80	14.13	15.77	25.65	15.69	24.64
2006	18.20	22.49	20.78	14.50	16.14	25.72	15.50	24.00
2007	20.64	19.97	25.53	19.37	17.22	31.32	17.60	23.19
2008	22.66	25.80	20.47	18.70	19.47	29.46	17.03	25.23
2009	19.19	18.42	20.24	17.56	15.07	26.73	14.41	24.93
2010	15.02	15.87	15.97	16.45	13.48	23.70	14.00	23.74
2011	21.46	20.15	17.58	17.94	15.07	25.42	16.70	26.22
2012	26.69	19.81	22.36	16.58	12.54	21.99	14.89	24.27
Ozone								
2000	62.1	57.8	57.2	56.3	40.6	67.4	58.0	65.5
2001	63.1	57.4	60.8	56.1	42.7	71.4	59.0	68.2
2002	65.2	59.5	62.6	55.5	43.6	71.2	58.7	68.9
2003	64.3	57.8	59.8	54.7	43.4	70.2	59.9	70.1
2004	61.3	56.1	59.8	54.2	41.1	67.1	58.6	68.1
2005	58.2	54.9	59.6	55.2	41.1	61.8	57.4	65.7
2006	61.0	57.9	60.3	57.1	43.7	64.2	58.2	65.2
2007	58.3	55.4	58.8	56.1	41.4	62.3	58.1	64.5
2008	59.5	58.1	57.8	57.5	44.7	65.0	59.4	66.1
2009	56.0	55.1	58.7	55.2	42.0	60.6	55.5	64.3
2010	55.4	53.2	58.4	53.3	41.3	59.4	54.8	62.1
2011	55.4	54.7	56.6	52.5	41.3	61.4	55.1	63.2
2012	56.8	55.1	57.9	52.5	43.1	61.9	55.6	63.2

go on to say, “This case suggests that an agency can insulate its actions from public scrutiny by funding a grant for controversial research and then basing its action on those findings. As long as the

agency does not take possession or control of the records, the FOIA will not assist those who wish to challenge the findings that underlie the agency action.” Researchers in environmental

epidemiology are making major public health claims, yet very few of the key data sets are available.

Our primary analysis method uses time series regression analysis (Bell et al. (2004), Bhaskaran et al. (2013), Clyde (2000), Dominici et al. (2003), Samet et al. (2000a, 2000b), Smith et al. (2009)). Time series regression analysis is a standard method of analysis for air quality/health effects time series. The basic idea is a time series regression analysis is to predict the mortality on any given day using a variety of covariates, including meteorology, seasonal and long-term trends, and the air pollution variable of interest (in this analysis, either ozone or PM<sub>2.5</sub>). Typically, lagged values of the meteorological and air pollution variables are included, to take account of effect that may persist over several days. Some analyses use other pollution variables as co-pollutants, to take account of possible interactions among the health effects of different pollutants. The analyses are conducted on more than 4700 days for each air basin for both ozone and PM<sub>2.5</sub>. Initially we treat each air basin separately as we want to be able to judge how any observed effect replicates. Then, results from the individual air basins are combined to obtain an overall estimate of the coefficient between mortality and the air pollutant of interest. The methods are sketched in Section 2 and the results are given in Section 3. More details are provided in the Supplemental Material.

To examine our primary analysis, we conduct an extensive sensitivity analysis. We build models of varying complexity. We hold out data and predict the held out data. In total we compute 78,624 models to examine the reliability of our modeling. We find that adding ozone or PM<sub>2.5</sub> to models does not improve our estimate of acute mortality. The air quality variables are essentially without predictive power.

Causal inference methods are being increasingly applied in the analysis of air pollution data (Zigler et al. (2016); Gilliland et al. (2017)). However, it is difficult if not impossible to infer a causal relationship in cases when there is not even evidence of association. Our paper presents data and analysis saying there is no association of acute mortality with ozone or PM<sub>2.5</sub> in California and that calls into question that ozone or PM<sub>2.5</sub> CAUSE acute mortality.

The results of this research are present in two parallel presentations. In this paper we present our work in a largely non-technical manner. The analysis of large observational data sets in necessarily complex so we provide that technical detail in our Supplemental Material. The rest of the non-technical paper is organized as follows. Analysis of large, complex observational time series data sets requires many analysis choices. Methods are described in Section 3 including Time Series Regression and an extensive sensitivity analysis. Results are given in Section 4. In Section 5 we discuss literature and our interpretation of our results.

## 2. Data

### 2.1. Mortality

The state of California provides access to the death public use files for the purpose of research. The cause of death is indicated by an ICD 10 code and provided by the Department of Health Services Center for Health Statistics. The mortality data we used can be obtained from the California Department of Public Health, [www.cdph.ca.gov](http://www.cdph.ca.gov). The total number of deaths of individuals over 65–74 and 75+ years of age with group cause of death categorized as AllCauses or HeartLung where HeartLung deaths were attributed to “Diseases of the Circulatory System” or “Diseases of the Respiratory System”. We created four outcome death categories: 65–74 AllCause, 65–74 HeartLung, 75+ AllCause, 75+ HeartLung. *Accidental deaths were excluded*. All deaths were aggregated to a day, year and air basin.

### 2.2. Air quality

The California Environmental Protection Agency’s Air Resources Board provides an Air Quality Data (PST) Query tool at the following website <http://www.arb.ca.gov/aqmis2/aqdselect.php>. Daily data can be retrieved for each combination of basin, day, and year. The following statistics were retrieved on July 19, 2014:

1. Daily Average PM<sub>2.5</sub> in  $\mu\text{g m}^{-3}$
2. Daily Average Ozone in parts per billion (ppb)
3. Daily Max 8 Hour Overlapping Average Ozone - State Data in ppb
4. Daily Max 8 Hour Overlapping Average Ozone - National Data in ppb

### 2.3. Temperature

The Carbon Dioxide Information Analysis Center (CDIAC) maintains data from the United States Historical Climatology Network. Daily temperature data was retrieved from the following website [http://cdiac.ornl.gov/ftp/ushcn\\_daily/](http://cdiac.ornl.gov/ftp/ushcn_daily/) for each combination of basin, day, and year the minimum and maximum temperature was obtained.

### 2.4. Humidity

The US Environmental Protection Agency maintains daily humidity data. Daily humidity data was downloaded from <http://www.epa.gov/ttn/airs/airsaqs/detaildata/downloadaqsdata.htm> for each combination of basin, day, and year.

### 2.5. Data displays

Fig. 2 shows that mortality and ozone levels are out of phase. As ozone goes up, mortality goes down. We follow the usual convention and look at deviations from the time trends. Fig. 3a shows daily mortality data for South Air basin and Fig. 3b shows the daily mortality after the seasonal trend is removed.

## 3. Statistical methods

### 3.1. Introduction to time series regression strategy

Time series regression is a highly developed area of statistical regression analysis for examination of a possible linear relationship between a health effect and an air quality variable where data is available at time points, most often daily. It is useful to review multiple linear regression in general and then how it is applied to time series analysis. First consider some necessary notation:

$$f(E(Y_t)) = \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + \dots + \beta_p X_{pt} + \beta_u X_{ut} \quad (1)$$

In words, some function of expected mortality,  $Y$  at time  $t$ , can be approximated as a linear sum of an intercept,  $\beta_0$ , and  $p$  observed quantities.  $X_u$  represents one or more unmeasured items, discussed shortly. The  $\beta$ 's are theoretical and are estimated from data. The estimated quantities are called regression coefficients, the  $\beta$ 's. The linear relationship is not exact so an error term is added to make the relationship an equation. Let  $X_{1t}$  be an air quality variable, e.g. ozone or PM<sub>2.5</sub>. The remaining variables are things that might affect mortality; they are called covariates. The interest is in the magnitude and sign of  $b_1$ , the estimate of  $\beta_1$ . We can rewrite 3.1 as follows:

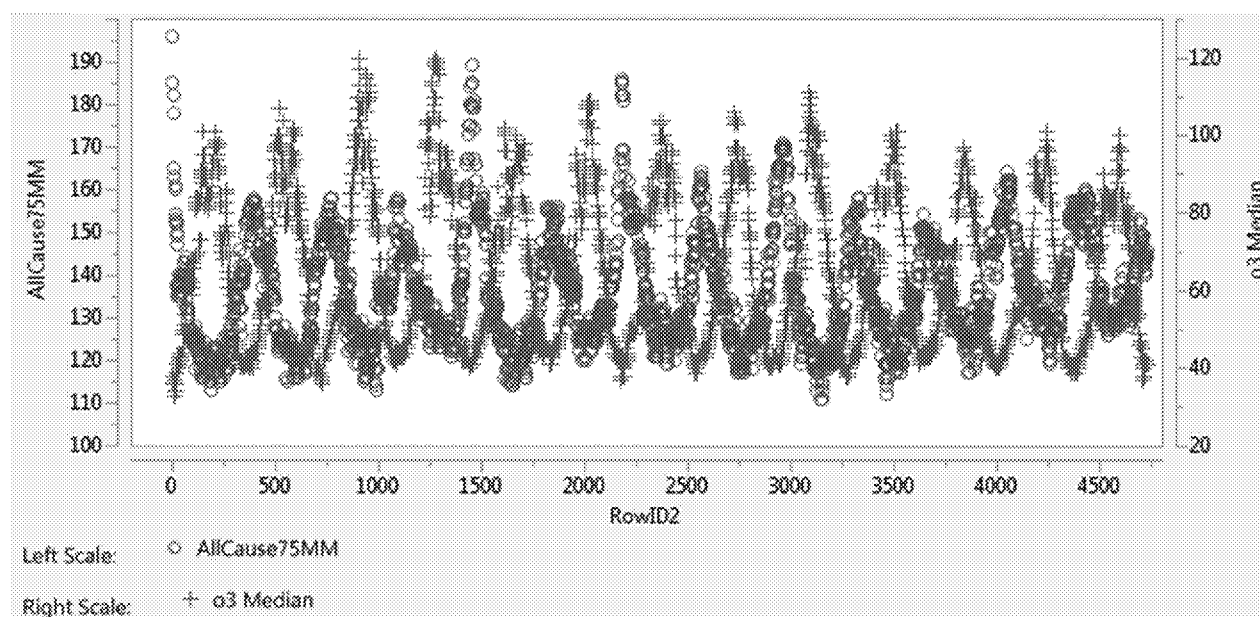


Fig. 2. Plot of the moving medians for All Cause deaths and ozone,  $o_3$ , versus time in days.

$$Y_t \sim g\left(\cdot; \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + \dots + \beta_p X_{pt} + \beta_u X_{ut}, \theta\right) \quad (2)$$

where  $g$  is a probability density function and  $\theta$  is a possible additional parameter representing the scale or shape of the distribution. The basic idea is that some function of mortality, linearly corrected for known confounders, is equal to an air quality effect plus any effect of one or more unknown confounders. We depend that the relationship is linear. We also depend that there are no unmeasured confounders, or that their effect is much smaller than and any air quality effect.

The interpretation of the model is that if one of the variables, say  $X_{1t}$ , is the air pollution variable of interest, then the corresponding parameter,  $\beta_1$ , is the coefficient of mortality based on that air pollution variable.

The sophistication comes into the analysis by the selection of the covariates and the care to not have important covariates/confounders left out of the model. It is well-known that mortality varies with the season, higher in winter and lower in summer, so that today's mortality has to be corrected for this seasonal effect. It is thought that air quality today might exert its effect on mortality some days later so that potential lag effects need to be considered. It is thought that the day of the week might have an effect on mortality. It is generally agreed that if there is an effect of air quality on mortality, the effect is stronger on older individuals.

The model is usually assumed to be log-linear; we take the log of expected mortality. The analysis decisions include: What time series smoother is chosen? Do we summarize the time variable to day, week, etc? Which outcome variables are used? Which air quality variables are used as predictors? Weather variables are typical covariates, e.g. min Temp, max Temp, maximum daily relative humidity, and wind speed. Any of the predictor or covariates might be lagged one or more days. Table 2 gives some of the modeling choices. There are many thousands of possible models. Nevertheless, certain choices have become standard in the literature on time series modeling of air quality and daily mortality data.

The next section shows how some of these standard choices may be applied to the present datasets.

### 3.2. Specific time series regression model

The time series model is adapted from models previously used for the National Morbidity, Mortality and Air Pollution Study (NMMAPS) data series; see in particular Dominici et al. (2003), Bell et al. (2004), and Smith et al. (2009). These methods are reviewed in Bhaskaran et al. (2013). The code used for the results in the present paper is at [www.unc.edu/~rls/EpiTimeSeriesCodeRLS.txt](http://www.unc.edu/~rls/EpiTimeSeriesCodeRLS.txt), S02 Supplement Code for Time Series. A data dictionary is given in S03a. The data used in this analysis is given in S03b. The specific models use for time series regression and the sensitivity analysis are given in our arXiv technical report, [arXiv.org](http://arXiv.org) > stat > arXiv:1502.03062. Smith (2015) give R code for time series regression modeling.

### 3.3. Sensitivity analysis

The purpose of this analysis is to understand the sensitivity of the models to different modeling selections. The two goals of the sensitivity analysis were to determine if there is a consistent model that best predicts mortality across years and air basins and the sensitivity of the predictions to the modeling assumptions. We assessed sensitivity using a leave-one-year-out, cross-validation strategy where, for each model, each year (2001–2012) was left out, the remaining 11 years was used to fit the model, and predictions were obtained for each day in the year omitted from the model fitting. Year 2000 was omitted from the sensitivity analysis due to the complications of missing data. This sensitivity analysis was accomplished by designing a factorial experiment to define the model specifications. We consider the following variables with the corresponding number of levels: air basins (8); health endpoints (4); air quality (7); maximum relative humidity (3); maximum temperature (3); minimum temperature (3); and time (1). An additional 13-level factor was considered by holding out each year from the model fitting process. Crossing the levels and omitting duplicate situations yielded 78,624 models that were considered. Predictions from the corresponding hold out years of each model

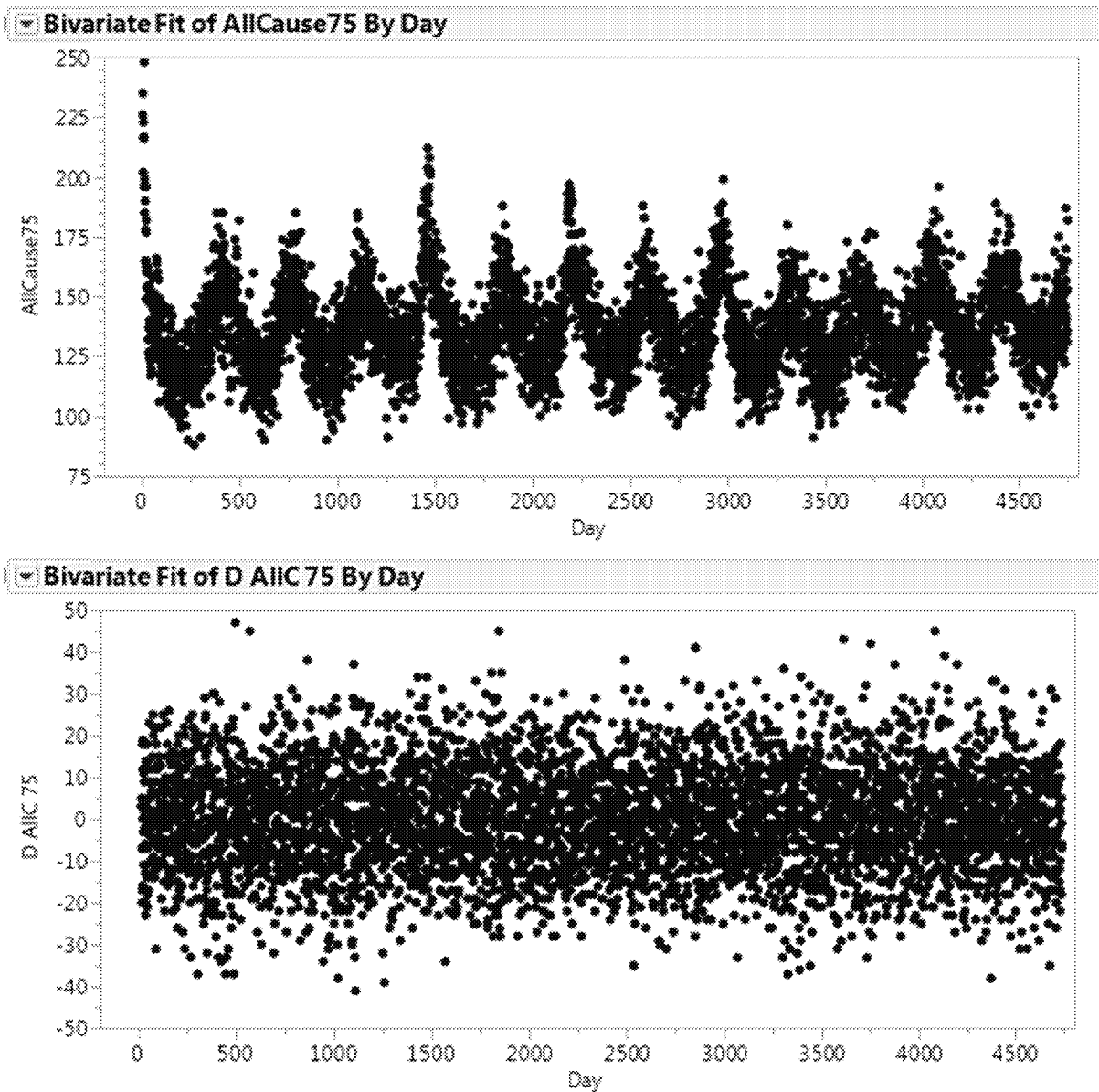


Fig. 3. a. Daily All Cause deaths versus day and b. daily AllCause deaths versus day after removing time trend.

**Table 2**  
Analysis decisions for Time Series Regression.

RowID	Model Item	Values
1	Time Series Smoother	Spline, moving average, ...
2	Unit of Time	Day, week, month, etc.
3	Predictor	PM2.5, ozone, NO2, SO2, CO, ...
4	Lag	No lag, lags of 1 day, etc. Sums of lags of two or more days, ...
5	Weather Covariates	MinTemp, maxTemp, avTemp, RH, wind speed, ...
6	Events	Forest fires, windblown air pollution, changed regulations, ...

were calculated.

In summary, for each of  $13 \times 8 \times 4 = 416$  unique combinations of “hold out year”, basin and health endpoint,  $7 \times 3 \times 3 \times 3 \times 1 = 189$  models are fit using the remaining 12 years of data. Predictions for

“hold out year” are obtained for each of the 189 models and the predictive capabilities are compared.

## 4. Results

### 4.1. Selected results for time series regression

#### 4.1.1. South Coast air basin

The approach outlined in Section 3.2 is applied to data from each of eight California air basins, Fig. 1. We concentrate initially on the two most populated air basins, South Coast and San Francisco Bay. The response variable is total non-accidental mortality among people aged 65 and over. For South Coast, running the analysis initially without air quality variables, Table S1 in S04 shows that five of the six meteorological variables (the exception is current-day maximum relative humidity) are very highly significant; since there is no obvious advantage to dropping the one non-

significant variable, we retain all six for subsequent analysis.

Table 3 shows the estimates, standard errors (SE), t-values and p-values of percent rise in mortality per 10 ppb rise in ozone, at various combinations of lags. The strongest positive estimate is based on lags 0, 1, 2 and 3, for which the model predicts a 0.1% rise in mortality per 10 ppb rise in ozone, but neither this nor any of the other values in the table is statistically significant; we detect no increase in mortality as ozone increases.

Corresponding results using PM<sub>2.5</sub> are shown in Table 4. Several estimates appear statistically significant at  $p < 0.05$  (smallest  $p = 0.017$ ), but all slopes are negative, which is not biologically plausible as it indicates a decrease in mortality. We conclude that either the small p-values are an artifact of chance, selection bias, or there is some other biological mechanism leading to a confounded result.

In these analyses, the over-dispersion parameter was of the order of 1.07 – in other words, the variance of the mortality variables is inflated by a factor of 1.07 compared with the Poisson distribution. This is typical for this kind of analysis and does not indicate a problem. A much larger over-dispersion parameter could indicate some important missing covariates.

#### 4.1.2. San Francisco Bay air basin

The meteorological analysis shows that daily maximum and daily minimum temperature are significant, but neither current-day nor lagged maximum relative humidity. See Table 5. The ozone models show a statistically significant result for lag 0 or distributed lags 0 and 1 *only* when maximum relative humidity is omitted from the model; for example, the distributed lags (0,1) coefficient is 0.59 with a standard error of 0.26 and p-value 0.02. Results for PM<sub>2.5</sub> are similar: mildly significant results ( $p = 0.02$  or  $0.04$ ) are obtained in distributed lag models without maximum relative humidity and including multiple lags (0 through 5 or 6); other models do not yield a statistically significant results. Given the large number of models tried and the relatively moderate p-values, we doubt that these results are evidence of a causal effect. More details are given in the **S04**.

#### 4.1.3. Combining results across air basins

In the NMMAPS papers on ozone, Smith et al. (2009) and Bell et al. (2004), single-city analyses were repeated for up to 98 US cities and then combined using a hierarchical model, based on an algorithm originally due to Everson and Morris (2000) and coded by Roger Peng into the R function “tlmise” (R Core Team, 2015). The same method is used to produce estimates that are combined across all eight air basins in our study.

The results of this analysis are shown in Table 6. None of the analyses shows a statistically significant effect when combined

**Table 4**

Statistical significance of PM<sub>2.5</sub> components with various combinations of lags: based on model (1)  $df_0 = 7$ ,  $df_1 = df_2 = 6$ . Estimate is percent rise in mortality for 10  $\mu\text{g}/\text{m}^3$  rise in PM<sub>2.5</sub>, South Coast air basin; response variable is non-accidental mortality aged 65 and over.

Lags Included	Estimate	SE	t-value	p-value
0	0.1212	0.0999	1.21	0.220
1	−0.1981	0.0992	−2.00	0.046
2	−0.2131	0.0996	−2.14	0.032
0,1	−0.0469	0.1146	−0.41	0.680
1,2	−0.2744	0.1153	−2.38	0.017
0,1,2	−0.1179	0.1297	−0.91	0.360
0,1,2,3	−0.1657	0.1508	0.52	0.600
0,1,2,3,4	−0.1624	0.1503	−1.08	0.280
0,1,2,3,4,5	−0.2621	0.1586	−1.65	0.098
0,1,2,3,4,5,6	−0.2437	0.1663	−1.46	0.140

**Table 5**

Statistical significance of meteorological components: based on model (1) without air pollution component and with  $df_0 = 7$ ,  $df_1 = df_2 = 6$ , fitted to nonaccidental mortality for ages 65 and up, San Francisco Bay air basin.

Variable	Lags	p-value
Daily Max Temperature	Current day 0	6.40E−10
Daily Max Temperature	Mean of 1,2,3	0.0075
Daily Min Temperature	Current day 0	0.001
Daily Min Temperature	Mean of 1,2,3	0.048
Mean Daily Relative Humidity	Current day 0	0.56
Mean Daily Relative Humidity	Mean of 1,2,3	0.34

across all eight air basins.

In S04, we report sensitivity analyses associated with different choices of response variable or degrees of freedom for the nonlinear spline components, and also, comparisons with results for the NMMAPS dataset.

#### 4.1.4. Nonlinear distributed lag models

Additional analyses, S04, replaces the linear exposure-response relations with nonlinear relationships (modeled by splines). Selected model results are shown here in Figs. 4 and 5. These two figures show no effect of ozone or PM<sub>2.5</sub> on mortality after other covariates are taken into account across the entire range of the air quality variables.

#### 4.2. Sensitivity analysis results

We considered the total deaths in four categories:

1. All cause deaths with accidents removed of individuals age [65,74]
2. All cause deaths with accidents removed for individuals age  $\geq 75$
3. Death by diseases of the respiratory or circulatory systems for individuals age [65,74]

**Table 6**

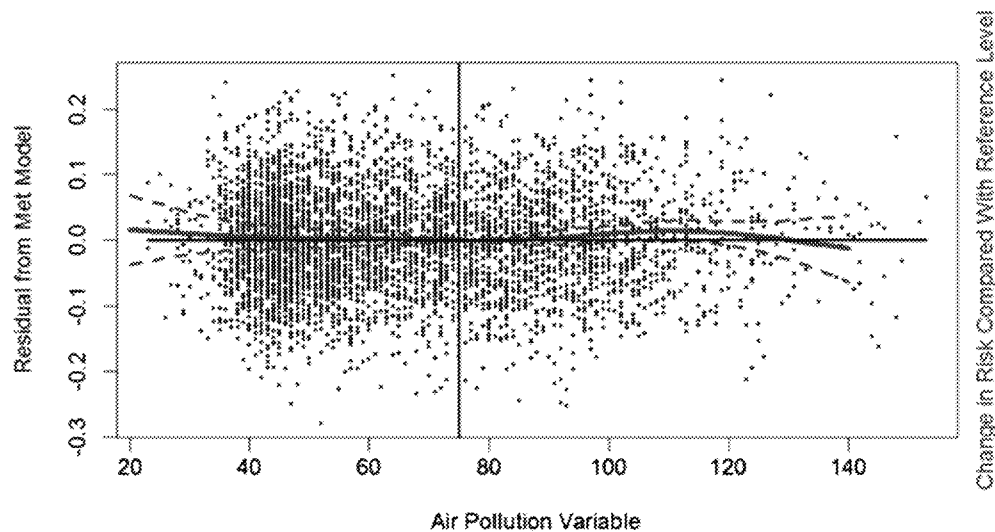
Combined results across all eight air basins.

Variable	Lags	Estimate	SE	t-value	p-value
Ozone	0,1	0.3376	0.2434	1.39	0.17
Ozone	0,1,2	0.3165	0.2466	1.28	0.20
Ozone	0,1,2,3	0.4149	0.3260	1.28	0.20
PM <sub>2.5</sub>	0,1	0.0126	0.2034	0.06	0.95
PM <sub>2.5</sub>	0,1,2,3	−0.0006	0.2464	0.00	1.00
PM <sub>2.5</sub>	0,1,2,3,4,5	0.0689	0.2799	0.25	0.81

**Table 3**

Statistical significance of ozone component with various combinations of lags: based on model (1)  $df_0 = 7$ ,  $df_1 = df_2 = 6$ . Estimate is percent rise in mortality for 10 ppb rise in ozone, South Coast air basin; response variable is non-accidental mortality aged 65 and over.

Lags Included	Estimate	SE	t-value	p-value
0	0.0869	0.1136	0.76	0.44
1	−0.0540	0.1134	−0.48	0.63
2	0.0443	0.1142	0.39	0.70
0,1	0.0222	0.1315	0.17	0.87
1,2	−0.0062	0.1329	−0.05	0.96
0,1,2	0.0788	0.1508	0.52	0.60
0,1,2,3	0.1143	0.1673	0.68	0.49
0,1,2,3,4	0.0857	0.1803	0.48	0.63
0,1,2,3,4,5	0.0047	0.1906	0.03	0.98
0,1,2,3,4,5,6	−0.0537	0.1993	−0.27	0.79



**Fig. 4.** Nonlinear dependence of mortality on ozone for South Coast air basin. Blue dots: residuals from the model that includes long-term trends, day of week and meteorology, plotted against the air pollution variable (ozone). Red solid and dashed curves: implied change of relative risk with respect to ozone level 0.075 ppm (the current ozone standard), with pointwise 95% confidence bands. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)

#### 4. Death by diseases of the respiratory or circulatory for individuals age $\geq 75$

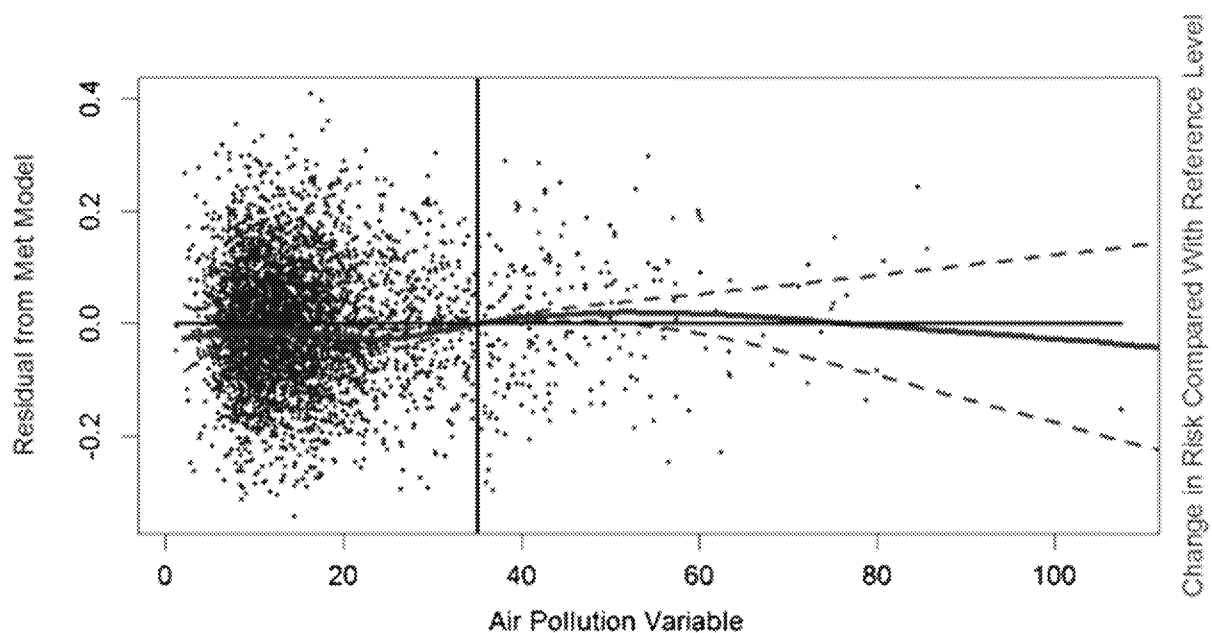
All methods were carried out for each health endpoint. For the sake of notation, let  $Y_{ijk}$  generically indicate the response variable for the corresponding basin, day and year. For the sensitivity analysis only, due to missing data in 2000, results for that year as the hold-out year are omitted due to large numbers of missing predictions. The following levels of covariates were considered in the subsequently defined generalized linear model, GLM.

By partitioning the air quality variable into two groups, Ozone (design levels 1, 2, 3, and 4) and  $PM_{2.5}$  (design levels 1, 5, 6, and 7), 108 models were isolated for each combination of air quality group,

basin, year, and response. Note 27 models appear in both groups because of the null level (level 1) of the air quality variable. A total of 78,624 models were computed. A data set of modeling results is available, S07.

The observed values for each combination of basin, year, and response were plotted (open circles) and the predictions from the 108 models were added to the same plot (solid red lines). Consider the results for the number of deaths caused by diseases of the respiratory or circulatory systems individuals age greater than or equal to 75 for the South Coast air basin for the Ozone group, Fig. 6.

Despite various forms of the 108 models, variability of the predicted values is relatively small as illustrated by overlapping red lines. Because the predictions are point estimates, prediction



**Fig. 5.** Nonlinear dependence of mortality on  $PM_{2.5}$  for San Francisco Bay air basin. Analogous to Fig. S4, using the full meteorological model (including relative humidity), and a nonlinear model for the relationship between  $PM_{2.5}$  and mortality. The relative risk was computed with respect to a reference level of  $35 \mu\text{g}/\text{m}^3$ , the current standard for daily max of  $PM_{2.5}$ .



intervals accounting for uncertainty overlap and thus make predictions virtually indistinguishable, Gasparrini and Armstrong (2013), Gasparrini, (2011). In terms of predictive performance, the models perform equally well. Note a similar result for the other air basins in both ozone groups and the PM<sub>2.5</sub> groups regardless of outcome (S05 Figs. A1–A32 and S06 Figs. B1–B32).

Mean squared prediction error (MSPE) was obtained for each model using data from the year that was held out. For each combination of air quality group, basin, year, and response, the MSPE of the model that only includes time as a covariate,  $MSPE_t$ , was used to calculate the ratio

$$R_{m/t} = \frac{MSPE_m}{MSPE_t},$$

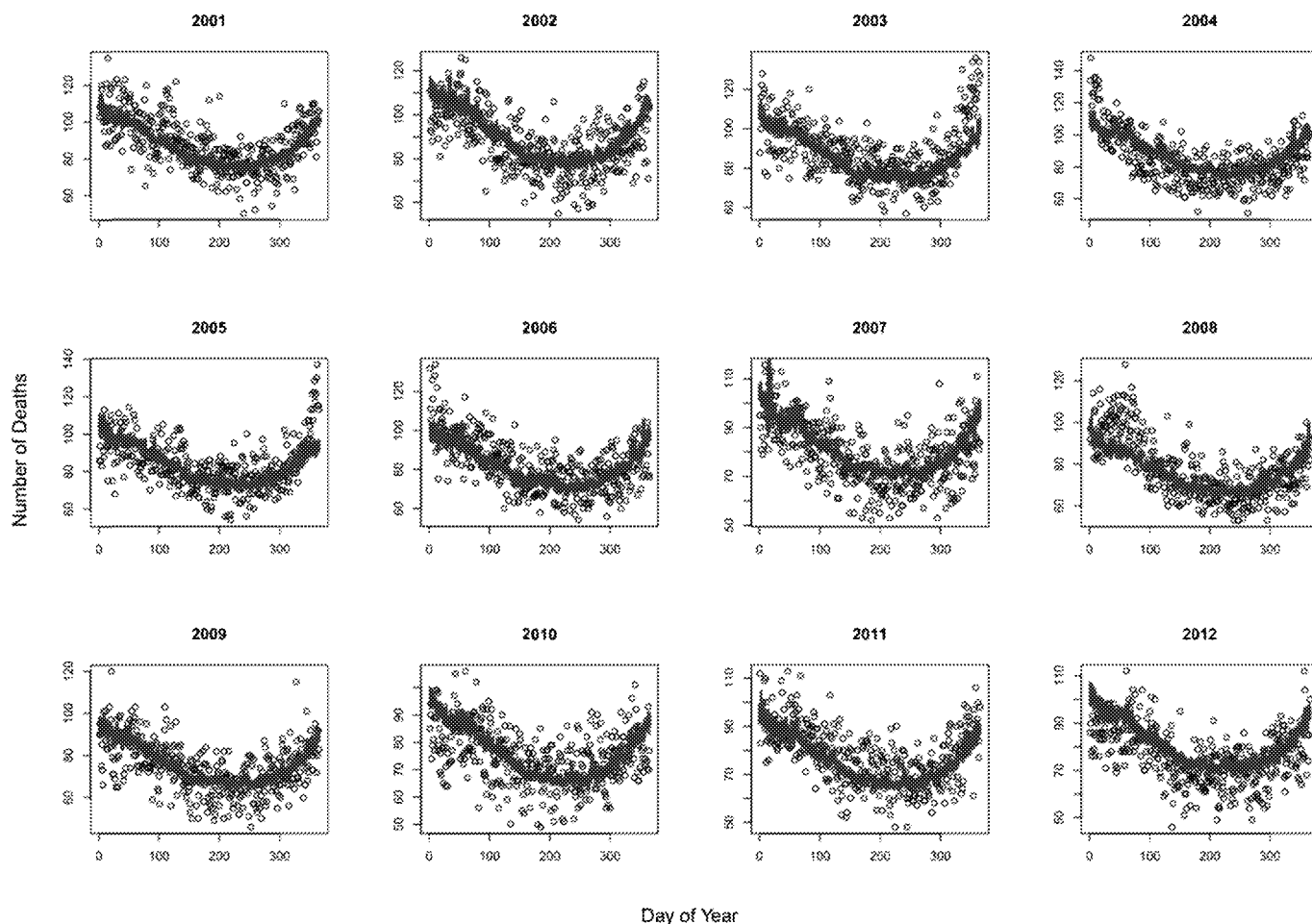
for each value  $m = 1, \dots, 108$  indexing the 108 models considered for that combination of air quality group, basin, year and response. For a given model, if the ratio is greater than 1, then the model that only included time had a smaller MSPE and if the ratio is less than 1, then the corresponding model had an MSPE smaller than the model that only included time. A boxplot of the 108 MSPE ratios,  $R_{m/t}$ , for each combination of air quality group, basin, year, and response are presented in Fig. 7. S08 (ozone) and S09 (PM<sub>2.5</sub>) give Box plots for different combinations of air basin, age class, and year. With few exceptions, the MSPE ratios all overlap 1.00. We interpreted this result that the extra variables did not improve the fit of the model, i.e. the terms were not necessary.

Consider the ratios of the MSPE of each of the 108 models for the same subset of data, number of deaths caused by diseases of the respiratory or circulatory systems individuals age greater than or equal to 75 for the South Coast air basin for Ozone group, Fig. 7. Recall a  $R_{m/t}$  value greater than 1 indicates the model had an MSPE larger than the model that include time effects only, and if the value of  $R_{m/t}$  is less than 1 then the model had an MSPE smaller than the model that included time only. Note that in general the ratio fell between 0.98 and 1.02. The variability of the ratio changes depending on which year is held out. The form of the model with the best MSPE (i.e. the smallest ratio) was not the consistent across year (S07 Supplementary data file, Prediction analysis results). In summary, the boxplots indicate that the differences in point-estimate predictions for hold-out years are small and there is not a consistent best form of the model. This result is consistent across health endpoint, air quality group, and basin, S08 and S09.

None of the model variables, including ozone or PM<sub>2.5</sub>, consistently improve on the model using just day of year; histograms of the ratios of predictive performance, any model relative to a model with just day of year, Fig. 8, show ratios consistently near one indicating that no model for mortality improves on a model with just day of year as a predictor.

## 5. Discussion

There is considerable literature in support of the current paradigm that air quality is associated with acute mortality. See, for



**Fig. 6.** South Coast (LA). Model hold out predictions for each year except 2000. "o" are observed deaths and the red overlay are model predictions. Note variability in predictions across the models is negligible as illustrated by overlapping red lines. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)

example, the review paper by Arkinson et al. (2014). Here we make the case that there is literature support for our findings of no association, and we offer some explanation for claims made in the current literature.

In this paper we analyze daily death data for the eight most populous air basins in California for associations with air quality. We found no associations using regression-based time series analysis. Extensive sensitivity analyses found air quality variables do not add to the predictive ability of the models examined. Even when the predictive ability is improved, the improvement is negligible relative to a model that only uses time of year. The form of the air quality variable that comes into models is inconsistent across basin/year combinations. In short, we were unable to find a consistent and meaningful relationship between air quality and acute death in any of the eight California air basins considered.

This result appears to contradict results from the well-known NMMAPS study that studied ozone and PM10, and subsequent studies involving PM2.5, e.g. HEI reports, Samet et al. (2000a, 2000b), Health Effects Institute (2003), Bell et al. (2004), Dominici et al. (2007), Zanobetti and Schwartz (2009), Smith et al. (2009). However, all of these were national studies. The present study is restricted to California, because we have been unable so far to compile a full-US dataset for post-2001. The ozone results that we have derived are consistent with those of the NMMAPS dataset when restricted to California, as shown in the S04. Note that in the context of ozone, Bell and Dominici (2008) and Smith et al. (2009) both drew attention to geographical heterogeneity in the pollution-mortality relationship; the present results show that this is an issue in post-2001 data as well. In addition, we find no effect for PM<sub>2.5</sub> for California.

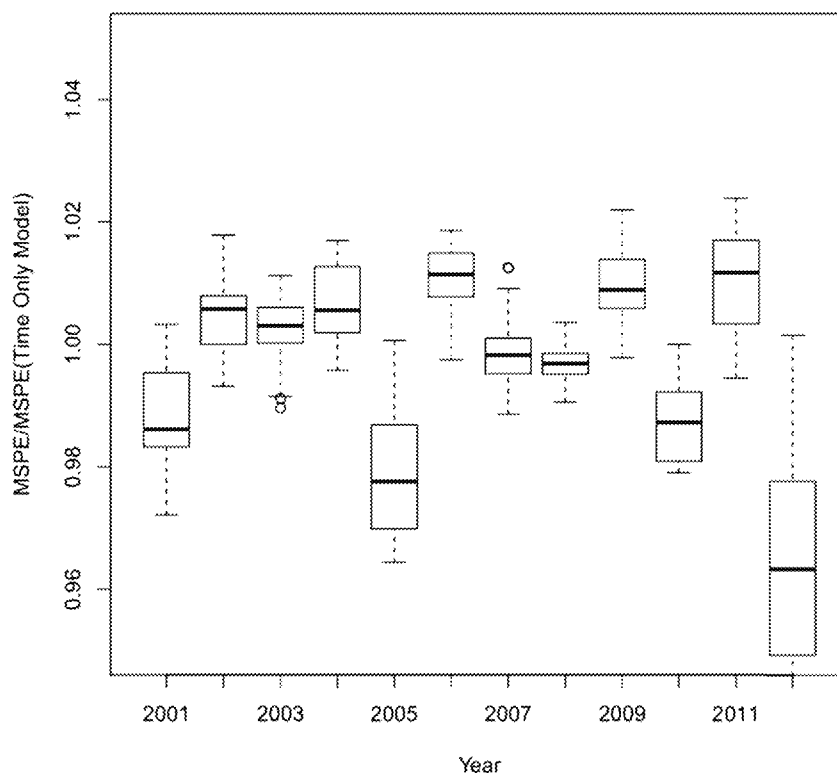
The question of chronic air quality mortality effects are addressed by Enstrom (2005) who found no chronic effects in California. His summary for all cause deaths for California is given in

Table 7. The average risk ratio was 0.9979, with a standard error of 0.0126.

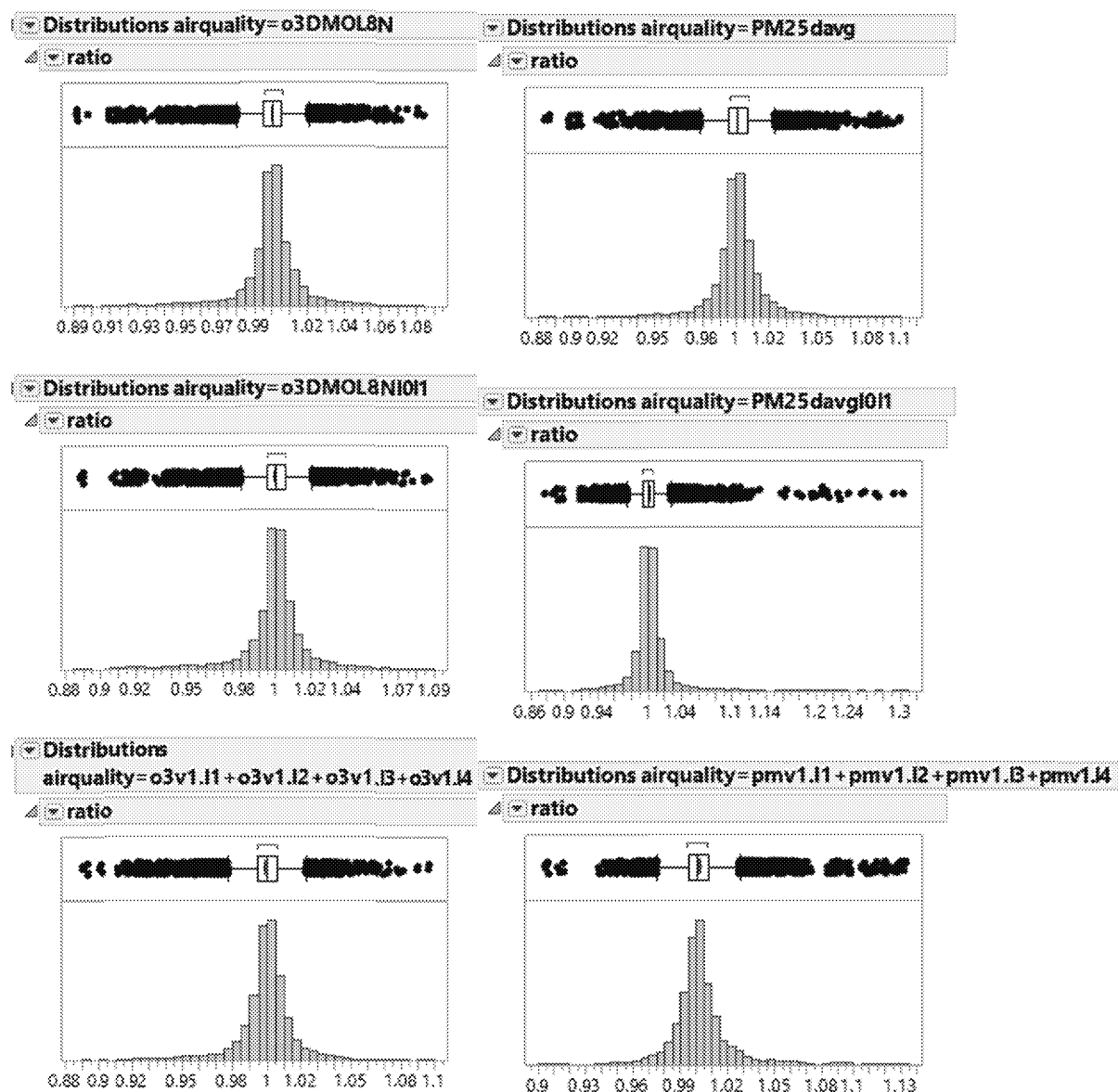
The standard method for showing cause and effect is through an experiment. A factor is changed and the result is examined. If the result changes with a change in the factor, then there is evidence for causality; See the Craig et al. (2012) discussion of natural experiments. Chay et al. (2003) examined a natural experiment; the EPA mandated reductions in air pollution for 270 of 501 counties studied. They found that air pollution levels were reduced, but *there was no reduction in deaths after adjustments for covariates*. Recently, an increase in PM<sub>2.5</sub> due to forest fires, a natural experiment, did not lead to an increase in mortality, Zu et al. (2016). Their result that improved air quality did not improve mortality was confirmed in an observational study by Cox et al. (2013).

How can the disparate claims be rectified? Multiple testing, multiple modeling, Clyde (2000), and publication bias might contribute. Covariate adjustments offers an additional explanation. Greven et al. (2011) state in their abstract, “... Results based on the global coefficient indicate a large increase in the national life expectancy for reductions in ... the average of PM<sub>2.5</sub>. However, ... trends in PM<sub>2.5</sub> and mortality is likely to be confounded by other variables trending on the national level .... *Based on the local coefficient alone, we are not able to demonstrate any change in life expectancy for a reduction in PM<sub>2.5</sub>.*” (Italics added.) In short, the claims made depend on how well covariates are taken into account. When they are taken into account, Styer et al. (1995), Chay et al. (2003), Janes et al. (2007), Greven et al. (2011), Cox et al. (2013), and Young and Fogel (2014) and the analysis provided here, there is no association of air quality with deaths.

Many authors have noted “geographic heterogeneity”, the measured effect of air quality is not the same in different locations, Smith et al. (2009), Young and Xia (2013), Greven et al. (2011), Young and Fogel (2014). Multiple authors, Smith et al. (2009),



**Fig. 7.** South Coast, ozone, respiratory or circulatory systems deaths, 75 and older. Box plots of hold one year out of mean square prediction errors, MSPE. The predictions are made by varying the modeling variables.



**Fig. 8.** Distribution of ratios of models fit with only time of year as a predictor and models that included air quality as well as weather variables. For a given model, if the ratio is greater than 1, then the model that only included time had a smaller MSPE; if the ratio is less than 1 then the corresponding model had an MSPE smaller than the model that only included time.

**Table 7**  
All Cause risk ratios for PM2.5 deaths in California (See Enstrom, 2011).

References	Years	Risk Ratio	Confidence Limits
McDonnell et al. (2000)	1976–1992	1.03	0.95–1.12
Krewski (2000)	1982–1989	0.872	0.805–0.944
Enstrom (2005)	1973–1982	1.039	1.010–1.069
Enstrom (2005)	1983–2002	0.997	0.978–1.016
Enstrom (2006)	1973–1982	1.061	1.017–1.106
Enstrom (2006)	1983–2002	0.995	0.968–1.024
Zeger et al. (2008)	2000–2005	0.989	0.970–1.008
Jerrett (2010)	1982–2000	0.994	0.965–1.025
Krewski (2010)	1982–2000	0.960	0.920–1.002
Krewski (2010)	1982–2000	0.968	0.916–1.022
Jerrett (2011)	1982–2000	0.994	0.965–1.024
Jerrett (2011)	1982–2000	1.002	0.992–1.012
Lipsen et al. (2011)	2000–2005	1.01	0.95–1.09
Ostro et al. (2010)	2002–2007	1.06	0.96–1.16

Young and Xia (2013), Krewski et al. (2000), Jerrett (2010), have not found any association of air quality with acute deaths in California. Nor did our reanalysis of the California data from NMMAPS. The existence of this “geographic heterogeneity” shows it is unlikely that air quality is *causing* deaths everywhere. Given that geographic heterogeneity exists, how should it be interpreted? First, statistical practice says that if interaction exists, recommendations should be site-specific. At a minimum, our analysis and literature data indicate that California should be considered separately from the rest of the US.

The question of interactions of air quality with geography deserves deeper consideration. Both Greven and Chay state there is no local or covariate adjusted effect of air quality on mortality. Milojevic et al. (2014) studied heart attacks and stroke in a very large UK data set. They determined the time of the event down to the hour. They studied six air components: CO, NO<sub>2</sub>, O<sub>3</sub>, PM<sub>10</sub>,

PM<sub>2.5</sub>, and SO<sub>2</sub>. They examined possible lag effects and they found no lag effects. They also essentially found no association of air quality, in particular ozone and PM<sub>2.5</sub>, with heart attacks or stroke. There were ten necropsies (among the 60 deaths) with the air pollution disaster in 1930 in the Meuse Valley reported on by Nemery et al. (2001). They report no effect on heart. They go on to state, “However, carbon particles should have been innocuous, unless they had adsorbed irritant acids. ... After a process of successive elimination, the commission concluded ‘that the sulphur produced by coal burning had a deleterious effect, either as sulphurous anhydride of acid, or as sulphuric acid, the production of which was made possible by unusual weather conditions.’” Together these papers effectively remove heart attacks and stroke as a possible etiology for acute air quality deaths. Given the known poor reliability, Ravakhan (2006), of death certificate cause of death, analysis of all cause deaths make sense as the primary endpoint of analysis.

The EPA states that “An extensive body of scientific evidence indicates that breathing in PM<sub>2.5</sub> over the course of hours to days (short-term exposure) and months to years (long-term exposure) can cause serious public health effects that include premature death and adverse cardiovascular effects.” See [www3.epa.gov/pm/2012/decfshealth.pdf](http://www3.epa.gov/pm/2012/decfshealth.pdf). The EPA goes on to say, “Most of the economic benefits (about 85 percent) are attributable to reductions in premature mortality associated with reductions in ambient particulate matter.” These and similar quotes from EPA seem to imply that causal associations are assumed. The present study calls into question whether those associations are genuine at all in the state of California. Given that California is the most populous state of the Union, the national benefits of recent tightening of the ozone and PM<sub>2.5</sub> standards may have to be re-assessed. We provide our analysis code, data set and sensitivity analysis results so that others can do their own evaluation.

As a note, the current standards (a) for PM<sub>2.5</sub> – daily limit of 35 µg/m<sup>3</sup>, annual mean 12 µg/m<sup>3</sup> averaged over three years and (b) Ozone: daily max 8-h average less than 70 ppb; based on the three-year average of fourth highest value per year. Past justifications for these standards rely heavily on positive associations for ozone or PM<sub>2.5</sub> with acute mortality, which do not accord with our results in California.

In summary, our empirical evidence, supported by literature and logic, is that current levels of air quality, ozone and PM<sub>2.5</sub>, are not associated with or causally related to acute deaths for California. Our results, well summarized in Figs. 4 and 5, show no effect of ozone or PM<sub>2.5</sub> at 12 µg/m<sup>3</sup> or across all doses examined. There is no indication of any effect at low doses, for example. These results should be taken into account in any future revisions of the NAAQS for PM<sub>2.5</sub> and O<sub>3</sub>.

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## Appendix A. Supplementary data

Supplementary data related to this article can be found at <http://dx.doi.org/10.1016/j.yrtph.2017.06.003>.

## Transparency document

Transparency document related to this article can be found online at <http://dx.doi.org/10.1016/j.yrtph.2017.06.003>.

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**From:** Steve Milloy [Ex. 6 Personal Privacy (PP)]  
**Sent:** 6/27/2017 3:44:09 PM  
**To:** Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]  
**Subject:** Fwd: Request for HEI action

FYI...

Begin forwarded message:

**From:** Steve Milloy [Ex. 6 Personal Privacy (PP)]  
**Subject:** Request for HEI action  
**Date:** June 27, 2017 at 11:32:10 AM EDT  
**To:** Dan Greenbaum <[dgreenbaum@healtheffects.org](mailto:dgreenbaum@healtheffects.org)>  
**Cc:** Robert O'Keefe <[rokeefe@healtheffects.org](mailto:rokeefe@healtheffects.org)>, Rashid Shaikh <[rshaikh@healtheffects.org](mailto:rshaikh@healtheffects.org)>, [jboogaard@healtheffects.org](mailto:jboogaard@healtheffects.org), [acohen@healtheffects.org](mailto:acohen@healtheffects.org), [mconstantini@healtheffects.org](mailto:mconstantini@healtheffects.org), [apatton@healtheffects.org](mailto:apatton@healtheffects.org), [dvorhees@healtheffects.org](mailto:dvorhees@healtheffects.org), [kwalker@healtheffects.org](mailto:kwalker@healtheffects.org), [avanerp@healtheffects.org](mailto:avanerp@healtheffects.org), [graddean@uw.edu](mailto:graddean@uw.edu), [fdominic@hsph.harvard.edu](mailto:fdominic@hsph.harvard.edu), [jeff.brook@ec.gc.ca](mailto:jeff.brook@ec.gc.ca), [foster@engr.wisc.edu](mailto:foster@engr.wisc.edu), [amy\\_herring@unc.edu](mailto:amy_herring@unc.edu), [alr@andrew.cmu.edu](mailto:alr@andrew.cmu.edu), [b.hoffmann@uni-duesseldorf.de](mailto:b.hoffmann@uni-duesseldorf.de), [irusyn@cvm.tamu.edu](mailto:irusyn@cvm.tamu.edu), [gambrozaitis@autoalliance.org](mailto:gambrozaitis@autoalliance.org), [rbabcock@hatci.com](mailto:rbabcock@hatci.com), [robert.babik@gm.com](mailto:robert.babik@gm.com), [barsicnicholasj@jdcorp.deere.com](mailto:barsicnicholasj@jdcorp.deere.com), [kpittel@ford.com](mailto:kpittel@ford.com), [gbuffali@volvocars.com](mailto:gbuffali@volvocars.com), [vrb8@chrysler.com](mailto:vrb8@chrysler.com), Susan Collet <[susan.collet@toyota.com](mailto:susan.collet@toyota.com)>, [kevin.webber@tema.toyota.com](mailto:kevin.webber@tema.toyota.com), [michael.dahl@fcagroup.com](mailto:michael.dahl@fcagroup.com), Dea Christopher <[Dea.Christopher@cat.com](mailto:Dea.Christopher@cat.com)>, [james.ehlmann@gm.com](mailto:james.ehlmann@gm.com), "Timothy A. French" <[tfrench@clpchicago.com](mailto:tfrench@clpchicago.com)>, [rholycro@ford.com](mailto:rholycro@ford.com), Horchler Kathleen <[Horchler.Kathleen@cat.com](mailto:Horchler.Kathleen@cat.com)>, [kaoru\\_horie@ahm.honda.com](mailto:kaoru_horie@ahm.honda.com), Takuya Ikeda <[tk-ikeda@mail.nissan.co.jp](mailto:tk-ikeda@mail.nissan.co.jp)>, John Viera <[jviera@ford.com](mailto:jviera@ford.com)>, [rjorgensen@emamail.org](mailto:rjorgensen@emamail.org), [donald.keski-hynnila@daimler.com](mailto:donald.keski-hynnila@daimler.com), [matthew.kevnick@tema.toyota.com](mailto:matthew.kevnick@tema.toyota.com), Dan Kieffer <[dan.kieffer@paccar.com](mailto:dan.kieffer@paccar.com)>, [takahiro.koseki@isza.com](mailto:takahiro.koseki@isza.com), "Leifheit, Susanne, Dr." <[susanne.leifheit@volkswagen.de](mailto:susanne.leifheit@volkswagen.de)>, [jeff.marley@volvo.com](mailto:jeff.marley@volvo.com), [jeff.marsee@isza.com](mailto:jeff.marsee@isza.com), [mitsui@mta.jama.or.jp](mailto:mitsui@mta.jama.or.jp), [jtakeda1@mazdausa.com](mailto:jtakeda1@mazdausa.com), [cnevers@autoalliance.org](mailto:cnevers@autoalliance.org), [Chris.Perzan@navistar.com](mailto:Chris.Perzan@navistar.com), [drobertson@mazdausa.com](mailto:drobertson@mazdausa.com), [rochford.Mike.W@cat.com](mailto:rochford.Mike.W@cat.com), [crs2@chrysler.com](mailto:crs2@chrysler.com), [nakia.l.simon@chrysler.com](mailto:nakia.l.simon@chrysler.com), [petra.sorsche@daimler.com](mailto:petra.sorsche@daimler.com), [michael.spallek@eugt.org](mailto:michael.spallek@eugt.org), [stuart.johnson@vw.com](mailto:stuart.johnson@vw.com), [jsucheki@enginemanufacturers.org](mailto:jsucheki@enginemanufacturers.org), Marie Valentine <[marie.valentine@toyota.com](mailto:marie.valentine@toyota.com)>, [vvarjabe@jaguarlandrover.com](mailto:vvarjabe@jaguarlandrover.com), [rich.s.wagner@cummins.com](mailto:rich.s.wagner@cummins.com), John Wall <[jcwall322@gmail.com](mailto:jcwall322@gmail.com)>, Hiroe Watanabe <[watanabe\\_hiroe@mail.nissan.co.jp](mailto:watanabe_hiroe@mail.nissan.co.jp)>, [WebsteL@NRD.NISSAN-USA.COM](mailto:WebsteL@NRD.NISSAN-USA.COM), "Werthman, Alyssa (A.A.)" <[awerthma@ford.com](mailto:awerthma@ford.com)>, George Wolff <[gwolff@airimprovement.com](mailto:gwolff@airimprovement.com)>, "Copley, G Bruce" <[g.bruce.copley@exxonmobil.com](mailto:g.bruce.copley@exxonmobil.com)>, Dennis J Devlin <[dennis.j.devlin@exxonmobil.com](mailto:dennis.j.devlin@exxonmobil.com)>, [Greco@api.org](mailto:Greco@api.org), Howard Feldman <[feldman@api.org](mailto:feldman@api.org)>, [fred.reitman@shell.com](mailto:fred.reitman@shell.com), [Stewart.Holm@afandpa.org](mailto:Stewart.Holm@afandpa.org), [tim\\_hunt@afandpa.org](mailto:tim_hunt@afandpa.org), Ketelslegers Hans <[hans.ketelslegers@concaawe.org](mailto:hans.ketelslegers@concaawe.org)>, Paul Greening <[pg@acea.be](mailto:pg@acea.be)>, Timothy Wallington <[twalling@ford.com](mailto:twalling@ford.com)>, [brian.c.mormino@cummins.com](mailto:brian.c.mormino@cummins.com), [hideharu\\_takemoto@n.t.rd.honda.co.jp](mailto:hideharu_takemoto@n.t.rd.honda.co.jp)

Hi Dan,

Since HEI funded the attached (dodgy) PM2.5 study in the upcoming NEJM, will HEI also request that study author Joel Schwartz make his data publicly available for independent review/replication?

As you are aware, all-cause mortality and guesstimated annual exposure data is not a recipe for convincing PM2.5 epidemiology.

Best,

Steve Milloy  
[JunkScience.com](http://JunkScience.com)

Ex. 6 Personal Privacy (PP)

Message

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**From:** Bowman, Liz [Bowman.Liz@epa.gov]  
**Sent:** 6/2/2017 9:15:31 PM  
**To:** Hale, Michelle [hale.michelle@epa.gov]; Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]; Ferguson, Lincoln [ferguson.lincoln@epa.gov]  
**Subject:** RE: From Heartland: GUEST AVAILABILITY: Meet the 'Climate Realists' Who Helped Trump Withdraw from Paris

Thanks, Michelle!

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**From:** Hale, Michelle  
**Sent:** Friday, June 2, 2017 4:55 PM  
**To:** Gunasekara, Mandy <Gunasekara.Mandy@epa.gov>; Bowman, Liz <Bowman.Liz@epa.gov>; Ferguson, Lincoln <ferguson.lincoln@epa.gov>  
**Subject:** FW: From Heartland: GUEST AVAILABILITY: Meet the 'Climate Realists' Who Helped Trump Withdraw from Paris

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**From:** Joseph Bast [mailto:JBast@heartland.org]  
**Sent:** Friday, June 2, 2017 4:47 PM  
**Subject:** From Heartland: GUEST AVAILABILITY: Meet the 'Climate Realists' Who Helped Trump Withdraw from Paris

Friends,

This news release is going out now to address fake claims that **climate science** supports staying in the Paris Accord.

If you are on the list, be prepared to get a call from reporters or Jim Lakely.

Joe

---

**From:** Jim Lakely [mailto:jlakely@heartland.org]  
**Sent:** Friday, June 02, 2017 2:56 PM  
**To:** Joseph Bast  
**Subject:** GUEST AVAILABILITY: Meet the 'Climate Realists' Who Helped Trump Withdraw from Paris



**GUEST AVAILABILITY: Meet the 'Climate Realists' Who Helped Trump Withdraw from Paris**

Joseph,



President Trump yesterday made the bold and correct decision to withdraw the United States from the Paris Climate Agreement. He offered sound economic arguments for exiting the accord, but the scientific justifications for getting out are just as strong.

The Heartland Institute – a national free-market think tank based in Illinois – has done more to promote the work of scientists skeptical of catastrophic man-caused global warming than any other organization. Below is a list of more than 200 scientists, economists, and policy experts who can make the scientific case for the United States exiting the Paris Climate Accord.

To interview any of these experts, please contact Heartland Institute Director of Communications Jim Lakely at [jlakely@heartland.org](mailto:jlakely@heartland.org) or call/text 312-731-9364.

## LIST OF TOP 'SKEPTICS' OF MAN-CAUSED GLOBAL WARMING

### A

Habibullo Abdussamatov  
Alexandre Aguiar  
Syun Akasofu  
George Allen  
Helmut Alt  
David Archibald  
J. Scott Armstrong  
Robert Armstrong  
Jerry Arnett  
Ron Arnold  
Dennis Avery

### H

Tom Harris  
Kenneth Haapala  
William Happer  
Howard Hayden  
Dennis Hedke  
Roger Helmer  
Victor Manuel Velasco Herrera  
Art Horn  
David Henderson  
Donald Hertzmark  
Christopher Horner  
Horst Lüdecke  
John Humphreys  
Tam Hunt  
Mary Hutzler

### O

James O'Brien  
Kendra Okonski  
Isaac Orr

### B

Tim Ball  
Robert Balling  
Joseph Bast  
Joe Bastardi  
Charles Battig  
E. Calvin Beisner  
Larry Bell  
Cory Bernardi  
Roger Bezdek  
Sonja Boehmer-Christiansen  
Christopher Booker  
Donald Boudreaux  
Alexandra (Sandy) Liddy Bourne  
Robert L. Bradley, Jr.  
William Briggs  
Barry Brill  
H. Sterling Burnett

### I

Craig Idso  
Andrei Illarionov  
James Inhofe  
Roy Innis  
Yuri Izrael

### P

Garth William Paltridge  
Genrot Patzelt  
Tim Patterson  
Benny Peiser  
Ian Plimer  
Andreas Prokoph

**C**

Gabriel Calzada  
Francisco Capella  
Robert “Bob” Carter  
Alan Carlin  
John Charles  
Paul Chesser  
George Christensen  
Joseph Clark  
John Coleman  
Russell Cook  
Roy Cordato  
Piers Corbyn  
William Cotton  
Richard Courtney  
Susan Crockford  
Walter Cunningham

**J**

Avril Terri Jackson  
Jim Johnston  
Michael Jungbauer

**R**

Paul Reiter  
Arthur Robinson  
Helen Roe  
Dana Rohrabacher  
Ronald Rychlak

**D**

Joseph D’Aleo  
Kevin Dayaratna  
Donn Dears  
James Delingpole  
Scott Denning  
Harold Doiron  
David Douglass  
Paul Driessen  
Terry Dunleavy  
Becky Norton Dunlop  
John Dale Dunn

**K**

Sam Kazman  
Richard Keen  
Madhav Khandekar  
William Kininmonth  
Hon. Vaclav Klaus  
Paul C. “Chip” Knappenberger  
David Kreutzer  
Jeff Kueter  
George Kukla

**S**

Nicola Scarfetta  
David Schnare  
Harrison Schmitt  
Joel Schwartz  
Tom Segalstad  
Russell Seitz  
James Sensenbrenner  
Gary Sharp  
Nir Shaviv  
Daniel Simmons  
Randy Simmons  
S. Fred Singer  
Fred Smith  
Lamar Smith  
Lawrence Solomon  
Douglas Southgate  
Willie Soon  
Roy Spencer  
Carlo Stagnaro  
H. Leighton Steward  
John Stossel  
Aaron Stover  
John Sununu  
Brain Sussman  
Daniel Sutter  
Graeme Swindles

**E**

Don Easterbrook  
Myron Ebell

**L**

Hans Labohm  
Donna Laframbois

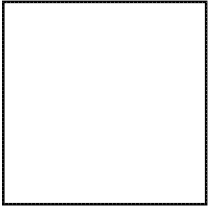
**T**

James Taylor  
Thomas Tanton

<u>James Enstrom</u> <u>Willis Eschenbach</u> <u>Christopher Essex</u> <u>Michael Economides</u> <u>David Evans</u>	<u>David Legates</u> <u>Jay Lehr</u> <u>Marlo Lewis</u> <u>Bryan Leyland</u> <u>Ben Lieberman</u> <u>Richard Lindzen</u> <u>Keith Lockitch</u> <u>Craig Loehle</u> <u>Sebastian Lüning</u> <u>Anthony Lupo</u>	<u>George Taylor</u> <u>Mitchell Taylor</u> <u>John Theon</u> <u>Richard Trzupek</u> <u>David Tuerck</u>
<b>F</b> <u>Peter Ferrara</u> <u>Robert Ferguson</u> <u>Sr. Walter Fett</u> <u>Terrence Flower</u> <u>Michelle Michot Foss</u> <u>Eigil Friis-Christensen</u> <u>Michael Fox</u> <u>Chris de Freitas</u>	<b>M</b> <u>Howard Maccabee</u> <u>Ken Malloy</u> <u>Jennifer Marohasy</u> <u>Jim Martin</u> <u>Gerald Marsh</u> <u>Phelim McAleer</u> <u>Tom McClintock</u> <u>Ann McElhinney</u> <u>Stephen McIntyre</u> <u>Ross McKittrick</u> <u>Owen McShane</u> <u>Robert Mendelsohn</u> <u>Patrick Michaels</u> <u>Robert Michaels</u> <u>Steven J. Milloy</u> <u>Ferenc Miskolczi</u> <u>Barun Mitra</u> <u>Christopher Monckton</u> <u>Patrick Moore</u> <u>Kilez More</u> <u>Alan Moran</u> <u>Marc Morano</u> <u>Nils-Axel Mörner</u> <u>Julian Morris</u> <u>Robert Murphy</u> <u>Iain Murray</u> <u>Todd Myers</u>	<b>V</b> <u>Brian Valentine</u> <u>Jan Veizer</u>
<b>G</b> <u>Indur Goklany</u> <u>Fred Goldberg</u> <u>Stan Goldenberg</u> <u>Robert Gordon</u> <u>Steve Goreham</u> <u>Pamela Gorman</u> <u>Laurence Gould</u> <u>Vincent Gray</u>	<b>N</b> <u>Marita Noon</u> <u>Mike Noel</u> <u>Joanne Nova</u>	<b>W</b> <u>Paul Waggoner</u> <u>Anthony Watts</u> <u>Gerd-Rainer Weber</u> <u>Todd Wynn</u> <u>Thomas Wismuller</u>

<u>William Gray</u> <u>Kenneth Green</u> <u>Bette Grande</u> <u>Kesten Green</u>		<b>Z</b> <u>Miklos Zagoni</u> <u>Benjamin Zycher</u>
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The Heartland Institute is a 33-year-old national nonprofit organization headquartered in Arlington Heights, Illinois. Its mission is to discover, develop, and promote free-market solutions to social and economic problems. For more information, call 312/377-4000.



If you would rather not receive future communications from The Heartland Institute, let us know by clicking [here](#).  
The Heartland Institute, 3939 N. Wilke Road, Arlington Heights, IL 60004 United States

Message

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**From:** Steve Milloy [Ex. 6 Personal Privacy (PP)]  
**Sent:** 6/27/2017 2:45:02 AM  
**To:** Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]  
**Subject:** Fwd: FYI: New Harvard PM 2.5 Study--->Request Medicare Data

Begin forwarded message:

**From:** "James E. Enstrom" <[jenstrom@ucla.edu](mailto:jenstrom@ucla.edu)>  
**Subject:** RE: FYI: New Harvard PM 2.5 Study--->Request Medicare Data  
**Date:** June 26, 2017 at 10:43:20 PM EDT  
**To:** 'Steve Milloy' [Ex. 6 Personal Privacy (PP)]  
**Cc:** 'stan young' [Ex. 6 Personal Privacy (PP)]

This cohort was analyzed in 2007-2008 by Zeger, Dominici, and Samet and their mixed findings (nothing in CA) are not even cited in article or editorial, even though Dominici is a co-author on both analyses. Of course they do not cite null findings properly or at all. The Medicare data should be publicly available and you should request it ASAP. Editorial proves that Drazen is a biased activist—he rejected both my 2005 and 2017 papers.

Schwartz is an ABSOLUTE DISGRACE to both physics and epidemiology! It is now the Green (Blue) scientists versus the Red scientists. The Greens (Blues) will probably win, unless the Reds get help from POTUS.

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**From:** Steve Milloy [Ex. 6 Personal Privacy (PP)]  
**Sent:** Monday, June 26, 2017 7:04 PM  
**To:** stan young [Ex. 6 Personal Privacy (PP)]; James E. Enstrom <[jenstrom@ucla.edu](mailto:jenstrom@ucla.edu)>  
**Subject:** Fwd: FYI: New Harvard PM 2.5 Study

NEJM study and editorial. Steve

Message

---

**From:** Steve Milloy [Ex. 6 Personal Privacy (PP)]  
**Sent:** 6/27/2017 2:44:41 AM  
**To:** Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]  
**Subject:** Fwd: FYI: New Harvard PM 2.5 Study

Begin forwarded message:

**From:** Stan Young [Ex. 6 Personal Privacy (PP)]  
**Subject:** Re: FYI: New Harvard PM 2.5 Study  
**Date:** June 26, 2017 at 10:17:40 PM EDT  
**To:** Steve Milloy [Ex. 6 Personal Privacy (PP)] "James E. Enstrom" <[jenstrom@ucla.edu](mailto:jenstrom@ucla.edu)>

Steve: Air quality is estimated with "with the use of previously validated prediction models."  
I've superficially looked at these models and they look like junk, lots of tuning variables. Stan

---

**From:** Steve Milloy [Ex. 6 Personal Privacy (PP)]  
**Sent:** Monday, June 26, 2017 10:04:23 PM  
**To:** Stan Young; James E. Enstrom  
**Subject:** Fwd: FYI: New Harvard PM 2.5 Study

NEJM study and editorial. Steve

Message

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**From:** Dravis, Samantha [dravis.samantha@epa.gov]  
**Sent:** 6/23/2017 4:55:19 PM  
**To:** Bolen, Brittany [bolen.brittany@epa.gov]; Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]  
**Subject:** RE: Steven Milloy and Myron Ebell

Let's push to next week if that's ok?

-----Original Message-----

From: Bolen, Brittany  
Sent: Friday, June 23, 2017 12:55 PM  
To: Gunasekara, Mandy <Gunasekara.Mandy@epa.gov>  
Cc: Dravis, Samantha <dravis.samantha@epa.gov>  
Subject: Re: Steven Milloy and Myron Ebell

5pm would be preferable.

Sent from my iPad

> On Jun 22, 2017, at 9:06 PM, Gunasekara, Mandy <Gunasekara.Mandy@epa.gov> wrote:  
>  
> I could do 5 to 6 tomorrow, but would have to leave then. We could meet at the trump hotel bar?  
>  
> Sent from my iPhone  
>  
>> On Jun 22, 2017, at 8:06 PM, Dravis, Samantha <dravis.samantha@epa.gov> wrote:  
>>  
>> I could do that too if it's on the earlier side. Mandy?  
>>  
>> Sent from my iPad  
>>  
>>> On Jun 22, 2017, at 8:04 PM, Bolen, Brittany <bolen.brittany@epa.gov> wrote:  
>>>  
>>> Ok. I feel bad I haven't returned Steve's call in some time. I could go tomorrow.  
>>>  
>>> Sent from my iPhone  
>>>  
>>>> On Jun 22, 2017, at 8:01 PM, Dravis, Samantha <dravis.samantha@epa.gov> wrote:  
>>>>  
>>>> Want to have drinks with us. Please do not let me forget, and if we can find a time for this next week that would be good. I suggested this after my discussion with Steven about how I did not appreciate some of the quarterbacking. He said they want to turn a new page.  
>>>>  
>>>>  
>>>> Sent from my iPad

**From:** Myron Ebell [Myron.Ebell@cei.org]  
**Sent:** 5/3/2017 6:19:13 PM  
**To:** Myron Ebell [Myron.Ebell@cei.org]  
**Subject:** Cooler Heads Coalition alert on Paris Climate Treaty

It has been reported by several media outlets that the tide is turning in the White House in favor of withdrawing from the Paris Climate Treaty. These reports appear to be based on what President Trump said at his Harrisburg rally last week and on the fact that White House counsel Don McGahn has disagreed with career State Department lawyers on two issues: whether the treaty allows parties to withdraw their NDCs and submit less ambitious ones; and whether remaining in the treaty can be used by environmental pressure groups in their legal challenges to stop the EPA from withdrawing or weakening the so-called Clean Power Plan, the methane rule, the CAFÉ standards, etc.

It is incredible to me that any political appointee in the White House would pay any attention at all to the legal opinions of career State Department lawyers who are heavily invested in the Paris Climate Treaty. If President Trump does decide to keep his campaign commitment contrary to the advice of the promise breakers in his administration, we will owe Don McGahn a big thanks for pointing this out.

Regardless of which way the tide is going in the White House, the final decision will be made by President Trump. I hope many non-profit groups will sign on to the joint letter I circulated yesterday. The deadline for signing is tomorrow at 3 PM. A letter signed by a lot of free market and conservative groups will show that the movement is united in support of the President's campaign promise. Let me know if your group can sign the joint letter. I'll be happy to send another copy if you can't find my e-mail from yesterday.

In terms of policy, CEI released a paper today by my colleagues Marlo Lewis and Chris Horner that I think is close to definitive on most of the major issues. Pasted below is the press release, which has a link to the paper. I have also pasted below the transcript of the President's remarks in Harrisburg regarding Paris and the Wall Street Journal editorial on Paris. Note that the arguments in the editorial are the reverse of the arguments made in the WSJ's earlier editorial on the endangerment finding. The WSJ published good letters by Steve Milloy and Hilary Sills responding to their dubious endangerment finding arguments, which I have also pasted below.

## **CEI press release: The Legal and Economic Case Against the Paris Climate Treaty**

Washington, May 3, 2017 - Today the Competitive Enterprise Institute released "The Legal and Economic Case Against the Paris Climate Treaty," a new report outlining why President Donald



Trump should withdraw the United States from the agreement.

According to the report's authors, CEI's Chris Horner and Marlo Lewis, the Paris Climate Agreement is a costly and ineffectual solution to the alleged climate crisis, and quite plainly, a treaty. Worse, the Agreement's mid-century emission reduction target can't be met without putting energy-poor countries on an energy diet.

"Failure to withdraw from the Paris Climate Treaty would entrench a constitutionally damaging precedent, set President Trump's domestic and foreign policies in conflict, and ensure many years of diplomatic blowback, imperiling America's capacity for self-government," said CEI senior fellow Marlo Lewis. "The agreement makes our country beholden to the demands of foreign leaders, U.N. bureaucrats, and international pressure groups, disallowing American consumers from determining our own energy needs and wants—including at what price."

According to the report, in addition to being detrimental to America's political and economic interests, the Paris Climate Treaty pursues an anti-energy agenda throughout the developing world that is both unjust and dangerous. The agreement, producing no detectable climate benefits, diverts trillions of dollars from productive investments that would enhance global welfare to feeding political ambitions.

New arguments from the U.S. State Department to remain in the Paris Climate Treaty are misguided, contrary to the language in the Paris Climate Agreement, and ignore serious legal consequences, says author CEI Senior Fellow Chris Horner. Horner responds to these arguments:

"The argument that we can simply renegotiate the Paris Climate Treaty is false; that's not an option under the deal. The agreement's language in Article 4 is clear and deliberate. According to this treaty, any revision must be more stringent—we cannot revise downward, and we are required to make it worse, every five years, forever. This is a truly terrible deal for U.S. consumers and the economy.

The Paris treaty is "politically binding," like prior climate treaties, but carries huge potential legal consequences, and the State Department is misleading the White House by ignoring these risks. If President Trump stays in this treaty and follows through in his energy agenda, every climate-activist state attorney general, environmental group, and the entire climate industry will surely litigate on the basis of the Paris treaty."

"The least we can do is give the U.S. Senate a vote. Other countries which signed this pact, submitted it for a vote: Spain, Germany, Japan, Australia, Canada, Mexico, and even France's Senate and the European Parliament got a vote. Surely, the United States is as democratic as these other countries... or are we?"

To read the executive summary of “The Legal and Economic Case Against the Paris Climate Treaty,” [please click here](#).

To read the paper in its entirety, [please click here](#).

Press release: <https://cei.org/content/cei-releases-new-report-serious-economic-and-legal-consequences-remaining-paris-climate>

Paper: <https://cei.org/content/legal-and-economic-case-against-paris-climate-treaty>

## Transcript of President Trump’s speech in Harrisburg regarding the Paris Climate Treaty:

<https://www.whitehouse.gov/the-press-office/2017/04/29/remarks-president-trump-make-america-great-again-rally-harrisburg-pa>

Our government rushed to join international agreements where the United States pays the costs and bears the burdens, while other countries get the benefit and pay nothing.

AUDIENCE: Booo --

THE PRESIDENT: This includes deals like the one-sided Paris Climate Accord, where the United States pays billions of dollars while China, Russia and India have contributed and will contribute nothing.

AUDIENCE: Booo --

THE PRESIDENT: Does that remind you of the Iran deal? How about that beauty, right?

On top of all of that, it's estimated that full compliance with the agreement could ultimately shrink America's GDP by \$2.5 trillion over a 10-year period. That means factories and plants closing all over our country. Here we go again. Not with me, folks. (Applause.)

Those are the facts, whether we like them or not. The dishonest media won't print them, won't report them, because the Washington media is part of the problem: their priorities are not my priorities and they're not your priorities, believe me. (Applause.) Their agenda is not your agenda. And I'll be making a big decision on the Paris accord over the next two weeks. (Applause.) And we will see what happens.

But they're all part of a broken system that is profited from this global theft and plunder of American wealth at the expense of the American worker. We are not going to let other countries take advantage of us anymore. Because, from now on, it's going to be America first. (Applause.)

Video: <https://www.theguardian.com/global/video/2017/apr/30/trump-says-paris-climate-agreement-is-one-sided-deal-video>

## **WSJ editorial: Springtime Out of Paris**

### **Staying in Obama's climate accord risks Trump's energy plans.**

President Trump and his advisers are debating whether to withdraw the U.S. from the Paris Climate Accords, and the issue is coming to a head. If he doesn't want to topple his own economic agenda, Mr. Trump's wisest course is to walk away from a pact that President Obama never put before the U.S. Senate.

Mr. Trump wants to revive growth and lift wages (see above), and a large part of that project is a bet on liberating U.S. energy production, notably natural gas and oil. Toward this end Mr. Trump issued an executive order in late March asking the Environmental Protection Agency to unwind Mr. Obama's Clean Power Plan.

The Obama team finalized CPP in late 2015, and the rule was immediately challenged in court by 28 states. Notable among the Obama Administration's legal defenses is that CPP is essential to fulfill the U.S. commitments to reduce carbon emissions under Paris. By the end the White House cited Paris as the legal justification for all its climate policies.

EPA Administrator Scott Pruitt is moving to repeal CPP and other Obama climate rules. Environmental groups will inevitably sue. If the U.S. remains in Paris, Mr. Pruitt will have to explain to the many Obama appointees on the federal bench that gutting CPP is a reasonable exercise of administrative power in light of the Administration's continued fealty to Paris carbon reductions. This is the sort of logical inconsistency that a creative judge might seize on to justify blocking Mr. Trump's EPA rules. By staying in Paris Mr. Trump may hand opponents a sword to kill his agenda.

The left is also pointing to Section 115 of the Clean Air Act, which gives EPA a mandate to regulate emissions that "may reasonably be anticipated to endanger public health or welfare in a foreign country." The catch is that EPA can only act if there is regulatory "reciprocity" among the nations involved. Such as the Paris accords.

Mr. Obama knew he was setting these carbon political traps as he rushed to commit the U.S. to Paris. His bet was that even a future GOP President would be reluctant to endure the international criticism that would follow withdrawal. And sure enough, Secretary of State Rex Tillerson and National Economic Council director Gary Cohn are making precisely this argument for staying in Paris.

Then again, Candidate Trump promised to withdraw, and he can't possibly be vilified for Paris more than he already has for everything else. His advisers have presented a way to short-circuit the supposed four-year process for withdrawing, which involves U.S. resignation from the U.N. Framework Convention on Climate Change.

This isn't a question of science or diplomacy. For Mr. Trump, the question is whether he wants to put his economic agenda at the mercy of anticarbon warriors and federal judges.

Appeared in the Apr. 27, 2017, print edition. <https://www.wsj.com/articles/springtime-out-of-paris-1493246903>

**These two letters to the editor were published in the 27<sup>th</sup> April WSJ:**

<https://www.wsj.com/articles/maybe-its-time-to-review-the-epas-finding-1493231243>

Regarding your editorial “Highway From the Endangerment Zone” (April 19): Many compelling reasons exist for revisiting the EPA’s endangerment finding for greenhouse gases.

Based on email obtained through the Freedom of Information Act and other evidence, the Obama EPA may have improperly predetermined the outcome of the “endangerment finding” (EF) rule-making. This evidence reveals a disturbing practice of EPA staff working covertly with green activist groups to shape major climate regulatory efforts.

The EF was issued in the wake of the November 2009 Climategate revelations. Climategate validated suspicions that climate scientists manipulated science, worked to cover up their high jinks and tried to silence critics. Although the EF (as well as the climate hysteria amid which *Massachusetts v. EPA* (2007) was decided) relied in great part on the controversial science giving rise to Climategate, the EPA refused to reopen the public comment period for the EF to explore its ramifications.

The EF is also scientifically suspect. It ignored the global-warming pause for starters. According to NASA satellite data (the most reliable temperature data), 2016 wasn’t warmer than 1998, despite there being 10% more carbon dioxide and 4.5% more methane (reputed to have 20 times the warming potential of carbon dioxide) in the atmosphere. We’ve also experienced a hurricane drought, fewer tornadoes and declines in other extreme weather events and disasters despite the aforementioned significant increases in atmospheric greenhouse gas levels.

The EF also relies on non-EPA scientific assessments that don’t meet the standards of the Information Quality Act.

**Steve Milloy**

*Potomac, Md.*

The Journal is asking the wrong question. It is not about eliminating the endangerment finding, it is about updating and possibly modifying it after almost a decade of new science and observations. The EF wasn’t a full scientific finding made by the EPA but an adoption of findings of other government agencies and the political summary conclusions of the U.N. Intergovernmental Panel on Climate Change (versus the underlying science of the IPCC). That the finding rather than being based on welfare was also based on an imminent risk to health and was a very controversial one is reflected by the fact that every single affected agency and department in the U.S. government—save the EPA—strongly opposed the EF. The review should be conducted as an evidentiary-type hearing process, with an A-Team that believes updated science supports modification and a B-Team arguing against, with the merits of various scientific assumptions, finding and reports thoroughly examined.

What has changed in eight years? It is confirmed that large swings in temperatures over centuries aren’t unusual. There has been no statistically significant change in atmospheric warming in 18 years, despite fiddling by NASA and the National Oceanic and Atmospheric Administration with temperature records. Computer models don’t agree with observed temperatures. There is a significant divergence between historic observations and model projections, entirely undermining the validity of the computer models.

We have strong evidence climate change is far less sensitive to CO<sub>2</sub> than first assumed. Observed science shows no statistically significant changes in droughts, flooding, hurricanes or rise in sea levels.

The goal of a review should not be to eliminate the EF but rather to check its early assumptions. Any adjustment in the EF could then be reflected in changes in policy.

## **Hilary Sills**

*Washington*

Myron Ebell  
Director, Center for Energy and Environment  
Competitive Enterprise Institute  
1310 L Street, N. W., Seventh Floor  
Washington, DC 20005, USA

Tel direct: ( )

Tel mobile: ( )

E-mail: [Myron.Ebell@cei.org](mailto:Myron.Ebell@cei.org)

*Stop continental drift!*

Message

---

**From:** Myron Ebell [Myron.Ebell@cei.org]  
**Sent:** 10/17/2018 4:39:23 PM  
**To:** Myron Ebell [Myron.Ebell@cei.org]  
**Subject:** Cooler Heads Coalition: next meeting, invitations to events, and new study on air pollution deaths and the proposed CAFE rule

Four items:

The Cooler Heads Coalition's November strategy meeting will be held on Tuesday, 13<sup>th</sup> November, beginning at 12 noon. We can't hold it on Monday the 12<sup>th</sup> because that is when Veteran's Day is observed this year for federal employees, etc.

Reminder: the Cooler Heads Coalition hosts Benny Peiser this afternoon (17<sup>th</sup> October) at 4 PM for a talk on The Crisis of EU Climate Policy. Benny is director of the Global Warming Policy Foundation in London. It's 4 PM at CEI, 1310 L Street, N. W. An informal reception with drinks and snacks will follow at around 5 PM.

I have pasted below an invitation from the CO2 Coalition for an event on 30<sup>th</sup> November at 4 PM in 485 Russell on Climate Change and Health. Rsvp directly to the CO2 Coalition at [info@CO2Coalition.org](mailto:info@CO2Coalition.org).

CEI released a new report this morning titled "[Will the Trump Fuel Economy Reform Proposal Create Deadly Air Pollution?](#)" Authored by Steve Milloy, the founder and publisher of JunkScience.com and author of Scare Pollution, the paper debunks false claims that the Trump administration plan to scale back government fuel efficiency mandates poses an offsetting risk of deaths from increased tailpipe emissions.

Opponents of the administration's Safe Affordable Fuel Efficient (SAFE) Vehicles Rule claim the proposal's lives-saved claim should be offset by deaths resulting from increased emissions of air pollutants associated with the rollback of mileage standards. The CEI report shows that available scientific and real-world evidence fail to link soot and dust in outdoor air (known as particulate matter) with death. Thus, the benefit-cost analysis for the SAFE rule—or any other Environmental Protection Agency rule—should not consider those unjustified claims.

Link to paper: [Will the Trump Fuel Economy Reform Proposal Create Deadly Air Pollution?](#) <https://cei.org/content/report-tailpipe-emissions-are-safe-trump-fuel-economy-reform-will-not-cause-air-pollution>

Link to press release: [Report - Tailpipe Emissions Are SAFE: Trump Fuel Economy Reform Will Not Cause Air Pollution Deaths](#)

Link to CEI tweet: <https://twitter.com/ceidotorg/status/1052529772377595904>

Link to CEI Facebook post:

<https://www.facebook.com/CompetitiveEnterpriseInstitute/posts/10156772838569036>

Link to Daily Caller story: <https://dailycaller.com/2018/10/17/cei-report-vehicle-standards-rollback/>



# The CO2 COALITION

## Climate Change and Health A CO2 Coalition White Paper

Tuesday, October 30, 2018 – 4:00 p.m. to 6:30 p.m.  
485 Russell Senate Office Building  
Constitution Avenue and 1<sup>st</sup> Street, NE  
*Light refreshments and wine will be served.*

The Intergovernmental Panel on Climate Change has issued a new report on the impacts of global warming. This report, *Global Warming of 1.5°C*, contains dire predictions of drought, disease, famine and death resulting from greenhouse gas emissions. Is this really how a changing climate will affect us? Will it increase or lessen disease? Our food supply? Weather events like floods or droughts? On October 30, 2018, the CO2 Coalition will present a panel discussion of our latest White Paper, *Climate Change and Health*. This study, by Australian physician D. Weston Allen, examines past, present and possible future impacts of climate change on a range of human health areas from nutrition to social and mental health, with insights into energy supplies and sufficiency. The panel discussion will be followed by a question and answer period.

**Moderator:** Harrison Schmitt, PhD, a Board member of the CO2 Coalition, is a geologist, university professor, former U.S. senator from New Mexico, retired NASA astronaut, and the most recent living person to have walked on the Moon.

**Author:** D. Weston Allen, MD, obtained a medical degree at the University of Queensland and his FRACGP and Graduate Diploma in Physical Medicine at Sydney University. He pioneered preventive and predictive medicine, transdermal nicotine for smokers and novel blood spatter studies.

**Panelist:** Patrick Michaels, PhD is the director of the Center for the Study of Science at the Cato Institute. He is a past president of the American Association of State Climatologists and was program chair for the Committee on Applied Climatology of the American Meteorological Society.

**Panelist:** James Steele is Emeritus Director of San Francisco State University's Sierra Nevada Field Campus and the author of *Landscapes and Cycles: An Environmentalist's Journey to Climate Skepticism*.

For reservations, email [info@co2coalition.org](mailto:info@co2coalition.org) or call 571-970-3180.

1620 N. KENT STREET • SUITE 603 • ARLINGTON, VA 22209

**From:** Myron Ebell [Myron.Ebell@cei.org]  
**Sent:** 10/17/2018 4:17:33 PM  
**To:** Myron Ebell [Myron.Ebell@cei.org]  
**Subject:** FW: Report - Tailpipe Emissions Are SAFE: Trump Fuel Economy Reform Will Not Cause Air Pollution Deaths

This morning, CEI released a new report titled "[Will the Trump Fuel Economy Reform Proposal Create Deadly Air Pollution?](#)" Authored by [Steve Milloy](#), the founder and publisher of JunkScience.com and a former CEI adjunct scholar, the paper debunks false claims that the Trump administration plan to scale back government fuel efficiency mandates poses an offsetting risk of deaths from increased tailpipe emissions.

Opponents of the administration's Safe Affordable Fuel Efficient (SAFE) Vehicles Rule claim the proposal's lives-saved claim should be offset by deaths resulting from increased emissions of air pollutants associated with the rollback of mileage standards. The CEI report shows that available scientific and real-world evidence fail to link soot and dust in outdoor air (known as particulate matter) with death. Thus, the benefit-cost analysis for the SAFE rule—or any other Environmental Protection Agency rule—should not consider those unjustified claims.

Link to paper: [Will the Trump Fuel Economy Reform Proposal Create Deadly Air Pollution?](#)

Link to press release: [Report - Tailpipe Emissions Are SAFE: Trump Fuel Economy Reform Will Not Cause Air Pollution Deaths](#)

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Link to CEI Facebook post:

<https://www.facebook.com/CompetitiveEnterpriseInstitute/posts/10156772838569036>

### **Daily Caller: Study Supports Trump's Claims that Vehicle Regulation Rollback will Save Lives**

By Jason Hopkins

<https://dailycaller.com/2018/10/17/cei-report-vehicle-standards-rollback/>

A new report reportedly debunks claims that the Trump administration is placing more people at risk of death with its plan to freeze the corporate average fuel economy (CAFE) standards.

The National Highway Traffic Safety Administration and the Environmental Protection Agency announced a plan in August to roll back vehicle emission standards established during the Obama era. The Trump administration argues that this regulation overhaul will give relief to consumers and save lives by reducing traffic fatalities. The rollback — referred to as the Safe Affordable Fuel Efficient (SAFE) Vehicles Rule — is expected to prevent 1,000 traffic fatalities per year.

...

In a response to these claims, the Competitive Enterprise Institute (CEI) released a report Wednesday that breaks down why this claim is incorrect. Namely, CEI finds that there is no real evidence to suggest that particulate matter (PM), dust and soot in outside air, causes death.

Their study, authored by Steve Milloy, focused on the science behind PM, which can come from both natural and man-made sources. Natural sources include instances such as forest fires and volcanic eruptions. Examples of man-made sources include smoking, smokestacks and tailpipes.

CEI lists studies, with evidence available for the public, that document humans developing no harm from inhaling PM, despite "secret science" studies in the past that have suggested otherwise.



“It is clear that the available evidence fails to link PM2.5 in outdoor air with death. Therefore, a benefit-cost analysis for the SAFE rule need not concern itself with PM2.5 and death,” the CEI report concluded. “Whatever minor changes in PM2.5 levels that might be brought about by the proposed SAFE rule — PM2.5 levels could slightly increase or even decrease because of the rule — will not cause or prevent deaths or change death rates.”

Message

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**From:** Gunasekara, Mandy [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=53D1A3CAA8BB4EBAB8A2D28CA59B6F45-GUNASEKARA,]  
**Sent:** 6/27/2017 12:57:14 PM  
**To:** Steve Milloy [Ex. 6 Personal Privacy (PP)]  
**Subject:** RE: FYI: New Harvard PM 2.5 Study--->Ask JHU McDermott

Thank you

---

**From:** Steve Milloy [mailto:[Ex. 6 Personal Privacy (PP)]]  
**Sent:** Tuesday, June 27, 2017 8:53 AM  
**To:** Gunasekara, Mandy <Gunasekara.Mandy@epa.gov>  
**Subject:** Fwd: FYI: New Harvard PM 2.5 Study--->Ask JHU McDermott

Hi Mandy,

Jim Enstrom makes a good point here about the need for obtaining the raw data.

Enstrom has the Pope data used in the initial (1993) publication of Pope's PM2.5 study.

Enstrom's reanalysis of the Pope study found no association between PM2.5 and death. Enstrom study.

Steve

Begin forwarded message:

**From:** "James E. Enstrom" <[jenstrom@ucla.edu](mailto:jenstrom@ucla.edu)>  
**Subject:** RE: FYI: New Harvard PM 2.5 Study--->Ask JHU McDermott  
**Date:** June 27, 2017 at 1:53:43 AM EDT  
**To:** 'Steve Milloy' [Ex. 6 Personal Privacy (PP)]  
**Cc:** 'stan young' [Ex. 6 Personal Privacy (PP)]

Read attached 2008 EHP article and note large geo variation (nothing in CA). Ask for MCAPS data from JHU McDermott, keeper of data for that study. Pin JHU down by Thursday as to whether or not there is access to MCAPS data. Cite my D-R study as evidence of the importance of underlying data. Analyze massive funding from EPA and NIH. Do not ask Dominici or HSPH before Thursday. Massive sample size means it is possible to get significance with RRs very close to 1.00. I will call you early Tuesday morning to discuss. New EPA staff needs to help us RIGHT NOW.

I will call you early Tuesday.

---

**From:** Steve Milloy [mailto:[Ex. 6 Personal Privacy (PP)]]  
**Sent:** Monday, June 26, 2017 7:49 PM  
**To:** James E. Enstrom <[jenstrom@ucla.edu](mailto:jenstrom@ucla.edu)>  
**Cc:** stan young [Ex. 6 Personal Privacy (PP)]  
**Subject:** Re: FYI: New Harvard PM 2.5 Study--->Request Medicare Data

Who is the keeper of the Medicare data?

On Jun 26, 2017, at 10:43 PM, James E. Enstrom <[jenstrom@ucla.edu](mailto:jenstrom@ucla.edu)> wrote:

This cohort was analyzed in 2007-2008 by Zeger, Dominici, and Samet and their mixed findings (nothing in CA) are not even cited in article or editorial, even though Dominici is a co-author on both analyses. Of course they do not cite null findings properly or at all. The Medicare data should be publicly available and you should request it ASAP. Editorial proves that Drazen is a biased activist—he rejected both my 2005 and 2017 papers.

Schwartz is an ABSOLUTE DISGRACE to both physics and epidemiology! It is now the Green (Blue) scientists versus the Red scientists. The Greens (Blues) will probably win, unless the Reds get help from POTUS.

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**From:** Steve Milloy [<mailto:> Ex. 6 Personal Privacy (PP)]

**Sent:** Monday, June 26, 2017 7:04 PM

**To:** stan young [Ex. 6 Personal Privacy (PP)]; James E. Enstrom <[jenstrom@ucla.edu](mailto:jenstrom@ucla.edu)>

**Subject:** Fwd: FYI: New Harvard PM 2.5 Study

NEJM study and editorial. Steve

Message

---

**From:** Gunasekara, Mandy [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=53D1A3CAA8BB4EBAB8A2D28CA59B6F45-GUNASEKARA,]  
**Sent:** 6/27/2017 12:57:09 PM  
**To:** Yamada, Richard (Yujiro) [yamada.richard@epa.gov]  
**Subject:** FW: FYI: New Harvard PM 2.5 Study--->Ask JHU McDermott  
**Attachments:** EHP PM2.5 & Mortality in Medicare Cohort Zeger 0908.pdf

FYI

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**Sent:** Monday, June 26, 2017 7:04 PM

**To:** stan young [Ex. 6 Personal Privacy (PP)] James E. Enstrom <[jenstrom@ucla.edu](mailto:jenstrom@ucla.edu)>

**Subject:** Fwd: FYI: New Harvard PM 2.5 Study

NEJM study and editorial. Steve

# Mortality in the Medicare Population and Chronic Exposure to Fine Particulate Air Pollution in Urban Centers (2000–2005)

Scott L. Zeger,<sup>1</sup> Francesca Dominici,<sup>1</sup> Aidan McDermott,<sup>1</sup> and Jonathan M. Samet<sup>2</sup>

<sup>1</sup>Department of Biostatistics, and <sup>2</sup>Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA

**BACKGROUND:** Prospective cohort studies constitute the major source of evidence about the mortality effects of chronic exposure to particulate air pollution. Additional studies are needed to provide evidence on the health effects of chronic exposure to particulate matter  $\leq 2.5$   $\mu\text{m}$  in aerodynamic diameter (PM<sub>2.5</sub>) because few studies have been carried out and the cohorts have not been representative.

**OBJECTIVES:** This study was designed to estimate the relative risk of death associated with long-term exposure to PM<sub>2.5</sub> by region and age groups in a U.S. population of elderly, for the period 2000–2005.

**METHODS:** By linking PM<sub>2.5</sub> monitoring data to the Medicare billing claims by ZIP code of residence of the enrollees, we have developed a new retrospective cohort study, the Medicare Cohort Air Pollution Study. The study population comprises 13.2 million participants living in 4,568 ZIP codes having centroids within 6 miles of a PM<sub>2.5</sub> monitor. We estimated relative risks adjusted by socioeconomic status and smoking by fitting log-linear regression models.

**RESULTS:** In the eastern and central regions, a 10- $\mu\text{g}/\text{m}^3$  increase in 6-year average of PM<sub>2.5</sub> is associated with 6.8% [95% confidence interval (CI), 4.9–8.7%] and 13.2% (95% CI, 9.5–16.9) increases in mortality, respectively. We found no evidence of an association in the western region or for persons  $\geq 85$  years of age.

**CONCLUSIONS:** We established a cohort of Medicare participants for investigating air pollution and mortality on longer-term time frames. Chronic exposure to PM<sub>2.5</sub> was associated with mortality in the eastern and central regions, but not in the western United States.

**KEY WORDS:** ecologic bias, fine particulate matter (PM<sub>2.5</sub>), heterogeneity, log-linear models, Medicare, mortality, prospective studies. *Environ Health Perspect* 116:1614–1619 (2008). doi:10.1289/ehp.11449 available via <http://dx.doi.org/> [Online 12 August 2008]

Particulate matter (PM) air pollution is a global public health problem (Cohen et al. 2004). In developing countries, levels of air-borne PM still reach concentrations at which serious health consequences are well documented (Chhabra et al. 2001; Ostro et al. 1999a, 1999b; Vichit-Vadakan et al. 2001). In developed countries, recent epidemiologic studies show evidence of continued adverse effects, even though PM levels have declined in the last two decades (Dominici et al. 2006; Jerrett et al. 2005; Laden et al. 2006; Pope et al. 2002). Increased mortality associated with higher levels of PM air pollution has been of particular concern, giving an imperative for stronger protective regulations (Bachmann 2007; Samet et al. 2006).

The evidence on PM and health shows acute and chronic effects (Pope and Dockery 2006). The London Fog of 1952 provides dramatic evidence of the risk of extremely high levels of PM air pollution over a period of about a week (Bell and Davis 2001; Bell et al. 2004; Logan 1953). Multisite time-series studies estimate associations between the risk of death and the level of air pollution shortly before death (shorter-term effects). These studies have provided evidence that far lower levels of PM than those that occur during events like the London Fog are still associated with increased risk over several days (Dominici et al.

2006, 2007; Katsouyanni et al. 1997; Lee et al. 2000; Samoli et al. 2001). Cohort studies estimate associations between time to death and exposure to air pollution over multiple years (longer-term effects). The design of these studies involves follow-up of cohorts for mortality over periods of years to decades and an assessment of mortality risk in association with estimated longer-term exposure to air pollution (Dockery et al. 1993; Hoek et al. 2002; Jerrett et al. 2005; Krewski et al. 2004; Laden et al. 2006; Pope et al. 1995, 2002). The exposure indicator in these studies was long-term average air pollution concentration, and time-varying exposures were not used, except in the most recent updates of several cohorts (Laden et al. 2006; Pope et al. 2002). Hence, inferences about the relative risks of chronic exposure derive from comparisons across study cohorts in geographic units with differing long-term PM levels.

Künzli et al. (2001) have reviewed and compared time-series studies and cohort studies. They point out that air pollution might increase *a*) the risk of underlying diseases leading to frailty and the shorter-term risk of death among frail persons, *b*) the risk of chronic diseases leading to frailty but without relation to timing of death, and *c*) the shorter-term risk of death among frail persons but unrelated to risk of chronic diseases. They note that time-series

studies capture items *a* and *c* but do not provide any information on item *b*; can be affected by confounding bias due to lack of control of time-varying covariates; and are useful to establish causation and to assess relative magnitude of effects across subgroups. On the other hand, Künzli et al. (2001) note that cohort studies capture items *a* and *b* but, in the absence of time-varying exposure, provide very little information on item *c*; can be affected by ecologic bias due to comparison of mortality risks across heterogeneous groups; and can be used to estimate years of life lost.

Because of their complexity and costs, only a small number of cohort studies have been conducted. The most rigorously executed, including the Harvard Six Cities Study and the American Cancer Society's Cancer Prevention Study II (CPS-II), have provided generally consistent evidence for an association between average exposure to PM air pollution over a decade and increased all-cause and cardiorespiratory mortality (Dockery et al. 1993; Laden et al. 2006; Pope et al. 1995, 2002). Both studies compared mortality rates across counties or larger geographic units with different long-term PM levels to estimate relative risks.

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The results of these studies, rather than of the time-series studies, have been used to quantify the risks of PM exposure for consideration of alternative values for the U.S. National Ambient Air Quality Standard for PM [U.S. Environmental Protection Agency (EPA) 2003]. These results have also been used to estimate the global burden of disease attributable to air pollution (Cohen et al. 2005).

Additional cohort studies are needed to confirm associations between multiyear average exposure to PM and mortality, to broaden the populations studied, to reduce the degree of geographic averaging of the exposure measure—a source of ecologic bias—and to refine the estimates by regions, age, and socioeconomic status (SES) categories across which PM exposures may vary. Toward this end, we have used data from the U.S. Medicare system, which covers nearly all persons  $\geq 65$  years of age in the United States. We linked Medicare mortality data to the PM<sub>2.5</sub> (PM  $\leq 2.5$   $\mu\text{m}$  in aerodynamic diameter) air pollution monitoring data to create a new retrospective cohort study, the Medicare Cohort Air Pollution Study (MCAPS), a study population of 13.2 million persons residing in 4,568 ZIP codes in urban areas having geographic centroids within 6 miles of a PM<sub>2.5</sub> monitor. We have previously described this general approach and the comparability of risk estimates based on MCAPS with estimates from the Harvard Six Cities Study and CPS-II (Efthim et al. 2008). In this article, we report on the relationship between 6-year average exposure to PM<sub>2.5</sub> and mortality risk in the MCAPS over the period 2000–2005. Our objective is to provide new evidence about the relative risk of death associated with chronic exposure to urban PM<sub>2.5</sub> by region and age-defined subgroups.

## Materials and Methods

MCAPS is a retrospective study of a cohort of 13.2 million persons  $\geq 65$  years of age enrolled in the U.S. Medicare system during the 6-year period 2000–2005. To create the cohort, we used the Medicare enrollment file for the study period, which provides a listing of all Medicare enrollees, along with demographic information (age, race, and sex) and ZIP code of residence. New participants enter each year as they enroll in Medicare, making this a “dynamic cohort.”

More specifically, the cohort consists of all those  $\geq 65$  years of age who enrolled in Medicare between 2000 and 2005 with ZIP code centroids within 6 miles of a U.S. EPA PM<sub>2.5</sub> monitoring station. Although the Social Security Administration maintains the addresses of those enrolled in Medicare, the Center for Medicaid and Medicare (CMS) provides an annual report of Medicare enrollees by ZIP code (often referred to as the enrollee file). Medicare enrollees enter the cohort on reaching their 65th birthday or on 1 January 1999 should they be  $\geq 65$  on that date. A small number of individuals enroll in Medicare the year after their 65th birthday, and those individuals enter the cohort on January 1 of the year of their enrollment. Individuals contribute time to the cohort until they die or are otherwise censored. Censorship occurs when individuals move to a ZIP code  $> 6$  miles from a U.S. EPA PM<sub>2.5</sub> monitoring station or are no longer reported in the enrollee file. We calculated age-specific mortality rates as the total number of deaths occurring within an age group and ZIP code divided by the total person-years contributed by that age group and ZIP code.

We obtained the date of death from the CMS. The date of death is provided to CMS

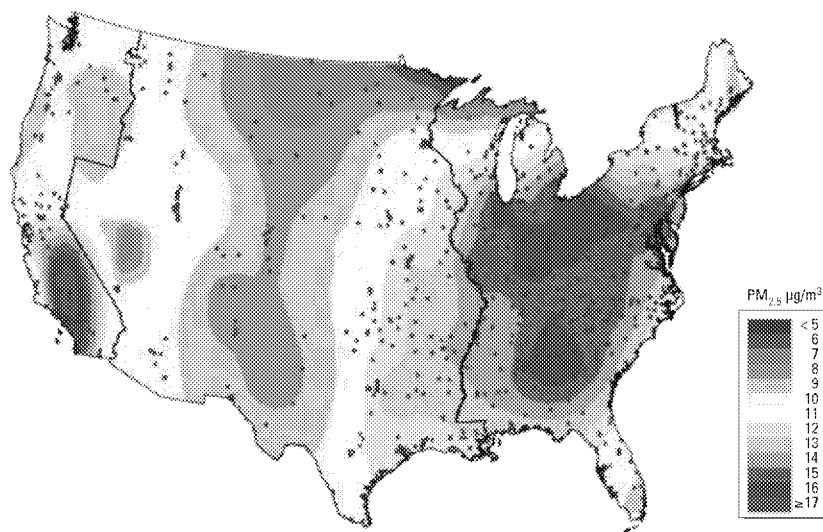
by the Social Security Administration, rather than by the National Center for Health Statistics (NCHS), which maintains the national death certificate system. To validate the mortality data from the CMS, we compared annual age- and sex-adjusted mortality rates from the CMS with the corresponding rates calculated from NCHS data for the 250 largest counties for the year 2000. The correlation coefficient was 0.998, indicating a high level of agreement between the two sources of mortality data aggregated to the county level—the finest partition available from the NCHS—for the 1-year period.

For this article, the outcome measure is the 6-year (2000–2005) mortality rate for persons residing within each of 4,568 ZIP codes for each of three age strata: 65–74, 75–84, and  $\geq 85$  years of age.

We obtained the PM<sub>2.5</sub> data from the U.S. EPA's AirData database (<http://www.epa.gov/oar/data/>), which included 1,006 monitors for the period 2000–2005. We calculated mean annual PM<sub>2.5</sub> values for the study period for all 4,568 ZIP codes with centroids within 6 miles of a monitor with  $> 10$  months of data per year. If three or more observations were available for a month, we considered this amount of data sufficient because PM concentration was measured every sixth day at many locations. Because the focus of this study was to estimate the effect of long-term exposure to PM<sub>2.5</sub>, we used a ZIP code 6-year average of PM<sub>2.5</sub> as a measure of the long-term exposure to PM<sub>2.5</sub> for an individual living within a ZIP code both during the 6 years of follow-up and for some time before cohort enrollment. We omitted the 1999 PM<sub>2.5</sub> data because this was the initial year of the U.S. EPA monitoring program and coverage was limited.

An advantage of MCAPS is that it comprises persons  $\geq 65$  years of age from nearly all of the major urban ZIP codes in the United States, and large numbers of deaths are reported within each age stratum and region. We have therefore estimated the age- and region-specific relative risks of chronic PM<sub>2.5</sub> exposure for *a*) the eastern region of the United States, with 2,938 ZIP codes in 421 counties; *b*) the central region, with 990 ZIP codes within 185 counties located between the Mississippi River and the Sierra Nevada range; and *c*) the western United States, with 640 ZIP codes within 62 counties extending from Washington State to Southern California. Figure 1 shows the location of the 4,568 ZIP code centroids, the three geographic regions, and the spatially smoothed levels of the 6-year average PM<sub>2.5</sub>. These spatially smoothed PM<sub>2.5</sub> levels should be interpreted with caution because of the sparseness of monitors in some areas.

We conducted the analyses separately within each of these three geographic regions



**Figure 1.** Map of spatially smoothed averages of PM<sub>2.5</sub> during the study period 2000–2005. The map also indicates 4,568 ZIP code centroid locations (black circles) and western, central, and eastern U.S. regions.

and for three distinct age strata: 65–74, 75–84, and  $\geq 85$  years of age. We also stratified initial analyses by sex and by the ZIP codes that were above and below the national median for education and income variables. Because the estimated effects for men and women and for high- and low-SES subgroups were very similar, we did not stratify the analyses reported here by sex or SES. The results of these stratified analyses are available in the Supplemental Material, Table 1 (online at <http://www.chponline.org/members/2008/11449/suppl.pdf>).

In estimating the effect on mortality of PM or other air pollutants, previous cohort studies and this new study rely entirely on cross-sectional comparisons of covariate-adjusted mortality rates across geographic locations with different PM levels, because PM is not time varying in the analyses. Previous studies have accounted for potential confounding by *a*) individual-level lifestyle factors, including age and smoking, and *b*) area-level characteristics such as county-level SES. The MCAPS provides individual-level age, sex, and race data but not data on lifestyle factors. To account for SES at the ZIP code level, we used age-specific SES variables from the 2000 U.S. Census. After preliminary analysis, we selected five SES variables at the ZIP code level from the U.S. Census Bureau's

Summary File 3. We restricted the analysis to those enrollees who report ZIP codes to CMS that correspond to ZIP code tabulation areas recognized by the U.S. Census Bureau. We selected two education variables, percentage of the population with a high school diploma and the percentage with a higher education degree, along with two household income measures, percentage of households living below the poverty level and median household income, as well as percentage unemployed. To create a univariate measure of SES by which to stratify the analysis, we averaged the ranks of the five SES variables for each county.

Previous cohort studies have found little effect of adjusting for self-reported smoking status (Krewski et al. 2000). Area-level differences in cigarette smoking, however, could potentially confound the association between PM<sub>2.5</sub> and mortality. Because the MCAPS data have neither individual- nor area-level smoking information, we used data from the NCHS to calculate the standardized mortality ratio (SMR) for chronic obstructive pulmonary disease (COPD) for the period 1993–2002, adjusted for age, race, and sex for each county. Because the vast majority of deaths from COPD in the United States are attributable to smoking (U.S. Department of Health and Human Services 2004), we used the SMR for COPD as a surrogate indicator

of the long-term smoking pattern of its residents. We included the county-level COPD SMR in the regression model, assigning the county value to all ZIP codes within a county.

For exposure, reliance on ZIP code-level rather than county-level PM concentration is a strength, but person-level covariate information is unavailable. To assess the potential consequences of imperfect control for confounding variables, we estimated the main models with three levels of adjustment: no control for ZIP code-level confounders, control for ZIP code-level SES variables, and control for ZIP code-level SES and county-level COPD SMRs.

Within each age stratum, we estimated the following log-linear regression models (McCullagh and Nelder 1989):

$$\log E(Y_i) = \log N_i + \beta_0 + \beta_{PM} Z_i + \beta_X X_i, \quad [1]$$

where  $Y_i$ ,  $N_i$ ,  $Z_i$ , and  $X_i$  are the number of deaths, number of person-years at risk, PM<sub>2.5</sub>, and SES and COPD SMR for ZIP code  $i$ . The parameter  $\beta_{PM}$  denotes the log relative risk of mortality associated with a 1- $\mu\text{g}/\text{m}^3$  difference in average PM<sub>2.5</sub> comparing ZIP codes that are otherwise similar with respect to SES and COPD SMR.

We report results for each region by age stratum and aggregated over the three age groups. To obtain the aggregated value, we fit a single log-linear regression with a common PM effect across the strata. We use generalized estimating equations (Diggle et al. 2002) to account for the correlation among age groups from the same ZIP code.

We carried out all analyses with the statistical programs R (R Development Core Team, Vienna, Austria) and SAS (version 9.1; SAS Institute Inc., Cary, NC). Programs are available from the authors.

## Results

Table 1 presents the total number of ZIP codes, PM<sub>2.5</sub> monitors, study population, person-years of follow-up, number of deaths, and crude death rates for the eastern, central, and western regions. The study population comprises 19.1 million persons followed for a total of 92.6 million person-years or an average of 4.8 years per person. An individual can contribute person-time to two age categories, so the age-specific numbers of people do not add to the total size of the population. There were 4.88 million deaths, for a crude mortality rate of 52.6 deaths per 1,000 person-years. The crude mortality in the western region was lower by roughly 4 deaths per 1,000 person-years compared with the other two regions, reflecting its younger population.

Table 2 presents the median and interquartile range of the ZIP code values of average PM<sub>2.5</sub> for 2000–2005, five SES variables,

**Table 1.** Numbers of ZIP codes, counties, monitoring sites, Medicare enrollees, person-years of follow-up, deaths, and crude death rates stratified by region and age group for MCAPS.

Characteristic	U.S. region			
	Eastern	Central	Western	All
ZIP codes	2,938	990	640	4,568
Counties	421	185	62	668
Monitoring sites	613	280	119	1,006
Persons (millions)	12.5	3.7	3.1	19.1
65–74 years	7.7	2.3	1.9	11.9
75–84 years	5.9	1.7	1.4	8.9
$\geq 85$ years	2.4	0.7	0.6	3.6
Person-years (millions)	61.1	17.2	14.4	92.6
65–74 years	30.2	8.8	7.3	46.3
75–84 years	22.6	6.2	5.3	34.1
$\geq 85$ years	8.2	2.2	1.9	12.3
Deaths (millions)	3.26	0.91	0.70	4.88
65–74 years	0.77	0.22	0.16	1.66
75–84 years	1.31	0.36	0.28	1.95
$\geq 85$ years	1.18	0.33	0.26	1.77
Crude death rate (deaths/1,000 person-years)	53.4	53.1	48.8	52.6
65–74 years	25.6	25.3	22.4	25.0
75–84 years	57.8	58.7	53.3	57.2
$\geq 85$ years	143.6	148.9	139.1	143.9

**Table 2.** Median (interquartile range) ZIP code-level SES values, median county-level COPD SMR, and median ZIP code-level PM<sub>2.5</sub>, by region in MCAPS.

Characteristic	U.S. region			
	Eastern	Central	Western	All
Percent with high school degree	50.0 (41.8–56.0)	49.6 (42.1–56.1)	44.4 (37.0–51.3)	49.3 (40.8–55.6)
Percent with higher degree	28.0 (19.7–41.9)	29.2 (18.2–43.9)	31.4 (21.0–44.7)	28.7 (19.5–43.0)
Percent in poverty	10.1 (5.5–18.5)	12.4 (6.9–20.6)	12.0 (7.0–19.3)	10.9 (6.0–19.2)
Percent unemployment	5.1 (3.5–8.3)	5.3 (3.6–8.2)	6.4 (4.5–8.9)	5.3 (3.6–8.4)
Median income (thousands US\$)	40.6 (31.6–52.6)	37.2 (29.8–48.2)	43.9 (35.0–56.4)	40.4 (31.5–52.3)
COPD SMR	94.0 (84.0–108.7)	109.2 (95.2–101.9)	101.9 (100.5–115.0)	99.6 (88.6–113.3)
PM <sub>2.5</sub> ( $\mu\text{g}/\text{m}^3$ )	14.0 (12.3–15.3)	10.7 (9.8–12.2)	13.1 (10.4–18.5)	13.2 (11.1–14.9)



and COPD SMRs by region. A scatterplot matrix [see Supplemental Material, Figure 1 (online at <http://www.ehponline.org/members/2008/11449/suppl.pdf>)] provides an  $X$ - $Y$  graph for each variable against each other variable. The proportions have been transformed to the log odds (logit) scale  $\{\log[p/(1-p)]\}$  to allow them to range over the whole real line rather than in (0,1); we show SES variables on a log scale to linearize their associations with mortality and to reduce the impact of a few ZIP codes with larger average incomes. The bottom row of Table 2 shows the pattern of pairwise associations between the logit of mortality and each of the covariates or  $PM_{2.5}$ . As expected, mortality has a strong negative association with each of the SES variables and a positive association with COPD SMRs.

Table 3 presents the estimated relative risks stratified by region. The MCAPS data provide evidence of an association between long-term exposure to  $PM_{2.5}$  and mortality in the eastern and central regions. For the eastern ZIP codes, we found that a ZIP code with  $10 \mu\text{g}/\text{m}^3$  higher long-term average of  $PM_{2.5}$  compared with another ZIP code with comparable age distribution, SES, and COPD SMR has a 6.8% higher mortality [95% confidence interval (CI), 4.9–8.7]. For the central ZIP codes, a  $10\text{-}\mu\text{g}/\text{m}^3$  increase in the long-term average of  $PM_{2.5}$  is associated with a 13.2% increase in mortality (95% CI, 9.5–16.9). For the ZIP codes in the western region, the association between  $PM_{2.5}$  and mortality does not achieve statistical significance. In the eastern region, adjustment for SES and COPD SMR substantially attenuates the association from 15.5% down to 6.8% per  $10 \mu\text{g}/\text{m}^3$  increase.

Table 4 presents the estimated region-specific log relative risks of death for each of the three age groups. In the western region, there is no evidence of an association for any of the three age groups. In the eastern and central regions, the largest effect is for the youngest group, 65- to 74-year-olds (11.4% and 20.4% per  $10\text{-}\mu\text{g}/\text{m}^3$  increase, respectively). The effects are smaller for the 75- to 84-year-olds and close to 0 for the oldest group, those  $\geq 85$  years of age. Hence, there is no evidence of a PM effect for persons  $\geq 85$  years of age in any of the three regions.

We verified the sensitivity of the inferences to the specific choice of model used to control for SES and COPD mortality rate, and the results are qualitatively robust, as shown in Table 3. We also conducted analyses stratified by sex and by ZIP codes above and below the national median for education and income variables. We found that the estimated effects for men and women and for high- and low-SES subgroups were very similar. We report the results of these analyses in the Supplemental Material, Table 1 (online at

<http://www.ehponline.org/members/2008/11449/suppl.pdf>).

## Discussion

In this article we present results from MCAPS, the largest study of potential health effects of chronic exposure to air pollution on morbidity and mortality to date, with 4.88 million deaths during more than 92 million person-years of follow-up. In comparison, a total of 20,765 deaths in the subcohort of the American Cancer Society (Krewski et al. 2000) were included in the analyses of air pollution and mortality, less than one-tenth the number in our study. However, CPS-II had an extensive set of individual-level risk factors. Given the availability of 1,006 air pollution monitors and mortality data from 4,568 ZIP codes within 668 urban counties, we have stratified the analyses geographically, choosing strata that broadly reflected differing source mixes and background disease patterns. This stratification also controls for potential confounders that vary on broad geographic scales.

Our estimated associations between long-term exposure to  $PM_{2.5}$  and mortality for the eastern and central ZIP codes give results qualitatively similar to those previously published from the Six Cities Study (Dockery et al. 1993) and CPS-II (Pope et al. 2002). We previously reported the comparability of MCAPS estimates to estimates from these studies, with the MCAPS cohort restricted to the 110 and the 6 counties corresponding to the 50 metropolitan areas and the 6 counties included in CPS-II and the Six Cities Study, respectively (Efthim et al. 2008). The MCAPS relative risk estimates, based on the 4,568 ZIP

codes, are 11.4% and 20.4% per  $10\text{-}\mu\text{g}/\text{m}^3$  increase in the eastern and central regions (95% CI, 8.8–14.1% and 15.0–25.8%, respectively) for the youngest age group, compared with the Six Cities Study and CPS-II values of 15.3% and 12.4%, respectively. Although the MCAPS data lack individual-level risk factor information, the MCAPS results were not qualitatively changed with inclusion of ZIP code-level or county-level SES indicators and the COPD SMR in the log-linear regression model (Tables 3 and 4). The size of the positive estimates does change with control for SES and COPD SMRs in the eastern region.

In MCAPS, we found compelling evidence of differing PM relative risks by age and geographic location. MCAPS estimates of the PM relative risk decline with increasing age category (Table 4), with no evidence of an association among persons  $\geq 85$  years of age. This decline may reflect the many competing causes of death for which the hazard of death increases with age. If only a subset of the competing causes is influenced by exposure to PM, then the PM-associated relative risk will reduce with age.

The MCAPS results indicate that the estimated positive association between  $PM_{2.5}$  concentration and mortality derives entirely from the eastern and central United States. A provocative finding is that the MCAPS data show no evidence of a positive association between ZIP code-level  $PM_{2.5}$  and mortality rates for the 640 urban ZIP codes in the western region. This lack of association is largely because the Los Angeles basin counties (California) have higher PM levels than other

**Table 3.** Percentage increase (95% CI) in mortality rate per  $10\text{-}\mu\text{g}/\text{m}^3$  increase in  $PM_{2.5}$  from the log-linear regression model and stratified by three regions, and relative risks for three levels of adjustment for demographic and socioeconomic variables.

Adjustment	U.S. region		
	Eastern ( $n = 2,938$ ZIP codes)	Central ( $n = 990$ ZIP codes)	Western ( $n = 640$ ZIP codes)
Age	15.5 (13.0 to 18.0)	17.8 (13.3 to 22.2)	0.3 (–1.9 to 2.5)
Age + SES	10.5 (8.4 to 12.5)	8.9 (5.2 to 12.5)	–0.3 (–2.2 to 1.6)
Age + SES + COPD	6.8 (4.9 to 8.7)	13.2 (9.5 to 16.9)	–1.1 (–3.0 to 0.8)

**Table 4.** Percentage increase (95% CI) in mortality rate per  $10\text{-}\mu\text{g}/\text{m}^3$  increase in  $PM_{2.5}$  from log-linear regression using MCAPS regional data adjusting for three levels of demographic and socioeconomic variables.

U.S. region/adjustment	Age group (years)			
	All	65–74	75–84	$\geq 85$
Eastern				
Age	15.5 (13.0 to 18.0)	31.1 (26.8 to 35.5)	17.6 (14.9 to 20.4)	–1.4 (–3.5 to 0.8)
Age + SES	10.5 (8.4 to 12.5)	17.3 (14.6 to 20.0)	12.4 (10.1 to 14.6)	1.4 (–0.7 to 3.5)
Age + SES + COPD	6.8 (4.9 to 8.7)	11.4 (8.8 to 14.1)	8.9 (6.8 to 11.0)	1.7 (–0.3 to 3.7)
Central				
Age	17.8 (13.3 to 22.2)	39.0 (29.7 to 48.2)	17.5 (12.7 to 22.2)	–2.1 (–5.9 to 1.6)
Age + SES	8.9 (5.2 to 12.5)	16.5 (10.9 to 22.1)	8.8 (4.6 to 13.0)	–0.7 (–4.2 to 2.8)
Age + SES + COPD	13.2 (9.5 to 16.9)	20.4 (15.0 to 25.8)	12.0 (7.6 to 16.4)	–0.3 (–4.0 to 3.3)
Western				
Age	0.3 (–1.9 to 2.5)	6.0 (2.3 to 9.6)	0.4 (–2.0 to 2.7)	–5.2 (–7.2 to 3.2)
Age + SES	–0.3 (–2.2 to 1.6)	–2.1 (–5.0 to 0.8)	0.3 (–1.8 to 2.5)	0.9 (–0.8 to 2.7)
Age + SES + COPD	–1.1 (–3.0 to 0.8)	–1.5 (–4.2 to 1.1)	–0.2 (–2.2 to 1.9)	–0.5 (–2.5 to 1.5)

West Coast urban centers, but not higher adjusted mortality rates.

Recent multisite time-series studies of the same Medicare data also suggest that the effects of airborne PM vary by region and season. In a study of cause-specific cardiovascular and respiratory hospital admissions and daily PM<sub>2.5</sub> levels in Medicare enrollees, Dominici et al. (2006) found strong regional patterns of effect across the 204 U.S. counties included during the period 1999–2002. Effect estimates for most of the cardiovascular causes were statistically significant in the eastern United States, but not in the western United States. These results were confirmed by a recent study (Bell ML et al., in press) that covered the period 2000–2005.

Previous studies of the mortality effects of chronic PM exposure or surrogates for populations in the western region have reported a range of relative risks. Most recently, Jerrett et al. (2005) investigated the PM–mortality association in a subset of the CPS-II cohort living in Los Angeles. They estimated an 11% increase in mortality per 10- $\mu\text{g}/\text{m}^3$  increase PM<sub>2.5</sub> (95% CI, –1% to 25%), using a chronic PM exposure interpolated with a statistical model of measured PM, traffic patterns, and proximity to freeways. Abbey et al. (1999) reported a follow-up analysis of data from the Adventist Health Study (Hodgkin et al. 1984) of > 6,000 nonsmoking residents of three air basins in California—San Francisco, Los Angeles, and San Diego—enrolled in 1977. They found a nonsignificant increase in all-cause deaths of roughly 5% per 10- $\mu\text{g}/\text{m}^3$  increase PM<sub>10</sub> (PM with aerodynamic diameter < 10  $\mu\text{m}$ ) in males and no effect in females. They reported a statistically significant association in respiratory deaths with the fraction of days > 100  $\mu\text{g}/\text{m}^3$  PM<sub>10</sub> for both sexes. Enstrom (2005) tracked mortality from 1973 through 2002 in about 50,000 California participants in the first national cohort study carried out by the American Cancer Society. Using PM<sub>2.5</sub> data for 11 counties in 1979–1983, he found no association across the full follow-up period and evidence of a small effect during the first decade of follow-up. Misclassification arising from the limited exposure data available may have biased this study toward the null.

Regional differences in effect estimates may be related to heterogeneity in the PM mixture. For example, higher PM<sub>2.5</sub> sulfate levels are observed in the eastern United States and higher PM<sub>2.5</sub> nitrate in the western United States. A recent analysis of the chemical composition of PM<sub>2.5</sub> from 2000 to 2005 characterized seasonal and regional variation for > 50 chemical components (Bell et al. 2007); several other studies have investigated the chemical composition of PM in specific regions of the United States (Ostro et al., in

press; Shen et al. 2007; Subramanian et al. 2007; Vega et al. 2007; Viana et al. 2008).

The relative risks estimated in this study might be affected by ecologic bias due to using aggregate rather than individual-level air pollution exposure and confounding factors. We estimate long-term exposure by taking averages of PM<sub>2.5</sub> concentrations during the study period 2000–2005 for each of the 1,006 monitors. We then assign this monitor-specific long-term average to the ZIP code of residence of each enrollee with a centroid located within 6 miles from the monitor. Bias in a cross-sectional study such as this one can occur if the difference between average personal PM exposure in a ZIP code and the average ambient value used in this study covaries with PM levels across the region after adjusting for SES and COPD SMRs. By including only ZIP codes whose centroids were within 6 miles of a monitor as the units of analysis, we used exposure values that are, on average, geographically closer to residences and thus reduced the potential for this type of ecologic bias.

In a few cohort studies, exposures have been estimated at the individual level using models and residence location (Hoek et al. 2002; Jerrett et al. 2005). This approach can assign person-specific estimates of exposure, potentially reducing the effects of exposure measurement error, depending upon the accuracy and precision of the exposure model. No cohort studies have measured personal exposure directly because this is not feasible with current technologies.

For MCAPS, the covariate information about SES was available only at the ZIP code level. Smoking data were represented by the COPD SMR for the county of residence, because the direct data on prevalence were unavailable. With the data reported here, we cannot directly evaluate the potential for ecologic bias from these terms. However, Krewski et al. (2000) have done so for CPS-II and the Six Cities Study by comparing relative risks with and without controlling for individual-level characteristics, including smoking, exercise, education, and occupational exposures. They found little change in the PM relative risk with adjustment, suggesting that ecologic bias is negligible for those personal characteristics measured in these two cohort studies.

Despite these methodologic complexities, we have shown that a cohort can be established using Medicare participants and routine monitoring data for investigating air pollution and mortality on longer-term time frames. In our initial analyses of the MCAPS data, we confirmed the association between PM<sub>2.5</sub> and mortality found in other studies but we found substantial and unexplained geographic heterogeneity in the effect of PM<sub>2.5</sub> across the United States.

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Message

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**From:** Gunasekara, Mandy [Gunasekara.Mandy@epa.gov]  
**Sent:** 6/27/2017 2:08:22 AM  
**To:** Steve Milloy [Ex. 6 Personal Privacy (PP)]  
**Subject:** Re: FYI: New Harvard PM 2.5 Study

Right now if that would work? [Ex. 6 Personal Privacy (PP)]  
Or tomorrow morning around 9:30.

Sent from my iPhone

On Jun 26, 2017, at 10:03 PM, Steve Milloy [Ex. 6 Personal Privacy (PP)] wrote:

Yes. When do you want to talk?

On Jun 26, 2017, at 9:47 PM, Gunasekara, Mandy  
<Gunasekara.Mandy@epa.gov> wrote:

Have you seen the attached? Do you have time to discuss tomorrow morning?

<air pollution.pdf>  
<air pollution editorial.pdf>

## Appointment

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**From:** Ringel, Aaron [ringel.aaron@epa.gov]  
**Sent:** 5/8/2018 4:12:39 PM  
**To:** Ringel, Aaron [ringel.aaron@epa.gov]; Harlow, David [harlow.david@epa.gov]; Rodrick, Christian [Rodrick.Christian@epa.gov]  
**Subject:** Mtg re: Glider Kits RIA  
**Location:** 3442 WJCN (Aaron's office)  
**Start:** 5/9/2018 2:00:00 PM  
**End:** 5/9/2018 2:30:00 PM  
**Show Time As:** Busy

### **Attendees:**

Richard Belzer  
Steve Milloy  
Joe DePew  
Jon Toomey

Message

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**From:** Steve Milloy [Ex. 6 Personal Privacy (PP)]  
**Sent:** 2/28/2018 8:42:37 PM  
**To:** Harlow, David [harlow.david@epa.gov]  
**Subject:** Please call when you can... [Ex. 6 Personal Privacy (PP)]

Message

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**From:** Steve Milloy [Ex. 6 Personal Privacy (PP)]  
**Sent:** 10/10/2018 7:57:42 PM  
**To:** Harlow, David [harlow.david@epa.gov]  
**Subject:** Please call when you can... [Ex. 6 Personal Privacy (PP)]

Message

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**From:** Grantham, Nancy [Grantham.Nancy@epa.gov]  
**Sent:** 6/18/2019 9:47:33 PM  
**To:** Schiermeyer, Corry [schiermeyer.corry@epa.gov]; McFaul, Jessica [mcfaul.jessica@epa.gov]; Konkus, John [konkus.john@epa.gov]; Abboud, Michael [abboud.michael@epa.gov]; Hewitt, James [hewitt.james@epa.gov]  
**CC:** Grantham, Nancy [Grantham.Nancy@epa.gov]  
**Subject:** FW: RSVPs for Scientific Integrity stakeholder meeting  
**Attachments:** Draft Agenda Stakeholder Meeting 2019.docx; RSVPs scientific integrity stakeholder meeting.xlsx

For the Scientific Integrity External Stakeholder meeting happening on Thursday, please find the RSVP list.

Also, the following media has RSVPed:

- Hiar, Corbin; E&E News
- Volcovici, Valerie; Reuters

There is a Member of Congress attending and we have coordinated with OCIR.

Henry Darwin has suggested that we do a press release after the meeting - to underscore our transparency.

We can discuss further.

Thanks ng



## **EPA ANNUAL SCIENTIFIC INTEGRITY STAKEHOLDER MEETING**

**Chair: Dr. Francesca Grifo, Ph.D., Scientific Integrity Official**  
**Thursday, June 20, 2019**  
**2:00 – 3:30 p.m. EDT**

**Room Location at HQ: Map Room -- HQ-Room-WJCE-1153**  
**USEPA William Jefferson Clinton East Building (WJC East)**  
**1201 Constitution Avenue N.W.**  
**Washington, DC 20004**

- 1. Introductory Remarks – 2:00 p.m.**  
*Jennifer Orme-Zavaleta, Ph.D., EPA Science Advisor*
- 2. Brief Overview of the Scientific Integrity Policy – 2:10 p.m.**  
*Francesca Grifo, Ph.D., Scientific Integrity Official*
- 3. Accomplishments – 2:25 p.m.**  
*Francesca Grifo, Ph.D., Scientific Integrity Official*
- 4. Scientific Integrity at EPA – 2:35 p.m.**  
*Vincent Cogliano, Ph.D., Deputy to the Scientific Integrity Official*
- 5. Question and Answer – 2:45 p.m.**  
*Moderator: Martha Otto, Scientific Integrity Program Lead*
- 6. Closing Remarks – 3:25 p.m.**  
*Francesca Grifo, Ph.D., Scientific Integrity Official*

Last Name	First Name	Organization
Battle	Mackenzie	Government Accountability Project
Belzer	Richard	Regulatory Checkbook, Neutral Science
Bergstrom	Caitlin	American Geophysical Union
Borkowski	Liz	George Washington University Jacobs Institute for Women's Health
Carlin	Alan	Carlin Economics and Science
Carter	Jacob	Union of Concerned Scientists
Conrad	Jamie	Conrad Law and Policy Counsell
D'Arcy	Daniel	Bipartisan Policy Center
Ebell	Myron	Competitive Enterprise Institute
Garant	Ray	American Chemical Society
Gould	Laurence	University of Hartford
Greenbaum	Daniel	Health Effects Institute
Halnon	Will	Government Accountability Project
Halpern	Michael	Union of Concerned Scientists
Halvorson	Gary	Council of Producers and Distributors of Agrotechnology
Koizumi	Kei	American Association for the Advancement of Science (AAAS)
Laakso	Joseph	Endocrine Society
LaCoe	Ryan	United States Energy Association
LeHuray	Anne	Naphthalene Council, Inc.
Lewis	Marlo	Competitive Enterprise Institute
McCormick	Lindsay	Environmental Defense Fund
Milloy	Steve	Junkscience.com
Moulton	Sean	Project on Government Oversight
Neifert	Brandi	American Chemical Society
Nyangulu	James	Monsanto
Padron Carney	Joanne	American Association for the Advancement of Science (AAAS)
Palasits	Sara	Committee on Science, Space, and Technology
Parr	Timothy	American Gas Association
Peppers	Mel	Energy and Commerce Committee
Ryman-Rasmussen	Jessica	American Petroleum Institute
Showstack	Randy	American Geophysical Union
Silverberg	Emily	U.S. House of Representatives
Stover	Aaron	The Heartland Institute
Vuille-Kowing	Kira	U.S. House of Representatives
Weerasinghe	Pamitha	Union of Concerned Scientists
Wise Thompson	Janie	House Committee on Science, Space & Technology

Message

**From:** Abboud, Michael [abboud.michael@epa.gov]  
**Sent:** 6/20/2019 1:46:54 PM  
**To:** Sauerhage, Maggie [Sauerhage.Maggie@epa.gov]  
**CC:** Press [Press@epa.gov]  
**Subject:** Re: Press at Scientific Integrity Meeting today

Thanks.

Sent from my iPhone

On Jun 20, 2019, at 9:41 AM, Sauerhage, Maggie <[Sauerhage.Maggie@epa.gov](mailto:Sauerhage.Maggie@epa.gov)> wrote:

Good morning – below is an updated list of attendees for today's Scientific Integrity Stakeholder Meeting. The meeting is from 2:00-3:30pm in WJCE 1153. There are four members of the press RSVP'ed to attend in person:

- Corbin Hiar, E&E News
- Eric Katz, Government Executive
- Randy Showstack, American Geophysical Union/[EOS.org](http://EOS.org)
- Valerie Volcovici, Reuters

A desk statement approved by David Dunlap and Jennifer Orme-Zavaleta is below.

### Desk Statement:

On June 20, 2019, the U.S. Environmental Protection Agency will hold its annual stakeholder meeting on scientific integrity. The annual stakeholder meeting is an opportunity for representatives from non-governmental organizations (NGOs) and regulated industry to hear about scientific integrity at EPA. At this year's meeting, the EPA Scientific Integrity Official will share information about current scientific integrity initiatives, discuss future plans for scientific integrity at EPA, and answer questions.

**Background:** EPA's Scientific Integrity Policy, which was issued in February 2012, provides a framework to ensure scientific integrity throughout EPA and to promote scientific and ethical standards, communications with the public, the use of peer review and advisory committees, and professional development. As noted in the April 2019 GAO report, EPA has developed a scientific integrity policy consistent with federal guidance and has taken robust actions to implement, monitor and regularly evaluate its program (<https://www.gao.gov/products/GAO-19-265>). Consistent with these high marks, the GAO made no recommendations for improving the Agency's Scientific Integrity program.

### RSVP List:

Last Name	First Name	Organization
Andersen	Michael	CO2 Coalition
Battle	Mackenzie	Government Accountability Project
Belzer	Richard	Regulatory Checkbook, Neutral Science
Bergstrom	Caitlin	American Geophysical Union
Borkowski	Liz	George Washington University Jacobs Institute for Women's Health
Carlin	Alan	Carlin Economics and Science
Carter	Jacob	Union of Concerned Scientists

Last Name	First Name	Organization
Charalambakis	Naomi	Federation of American Societies for Experimental Biology
Conrad	Jamie	Conrad Law and Policy Counsell
D'Arcy	Daniel	Bipartisan Policy Center
Dziadon	Daniel	U.S. House of Representatives Committee on Science, Space, and Technology
Ebell	Myron	Competitive Enterprise Institute
Garant	Ray	American Chemical Society
Gould	Laurence	University of Hartford
Greenbaum	Daniel	Health Effects Institute
Halnon	Will	Government Accountability Project
Halpern	Michael	Union of Concerned Scientists
Halvorson	Gary	Council of Producers and Distributors of Agrotechnology
Hartwig	Will	American Chemical Society
Hiar	Corbin	E&E News
Johnson	Joseph	US Chamber of Commerce
Katz	Eric	Government Executive
Koizumi	Kei	American Association for the Advancement of Science (AAAS)
Laakso	Joseph	Endocrine Society
LaCoe	Ryan	United States Energy Association
LeHuray	Anne	Naphthalene Council, Inc.
Lewis	Marlo	Competitive Enterprise Institute
Logomasini	Angela	Competitive Enterprise Institute
McCormick	Lindsay	Environmental Defense Fund
Michaels	Patrick	Competitive Enterprise Institute
Milloy	Steve	<a href="http://Junkscience.com">Junkscience.com</a>
Motte	Ernst	CO2 Coalition
Moulton	Sean	Project on Government Oversight
Neifert	Brandi	American Chemical Society
Nyangulu	James	Monsanto
O'Connell	Maggie	American Fuel and Petrochemical Manufacturers
Padron Carney	Joanne	American Association for the Advancement of Science (AAAS)
Palasits	Sara	U.S. House of Representatives Committee on Science, Space, and Technology
Parr	Timothy	American Gas Association
Peppers	Mel	Energy and Commerce Committee
Ryman-Rasmussen	Jessica	American Petroleum Institute
Showstack	Randy	American Geophysical Union
Silverberg	Emily	U.S. House of Representatives
Stover	Aaron	The Heartland Institute
Tonko	Representative Paul	U.S. House of Representatives
Volcovici	Valerie	Reuters
Vuille-Kowing	Kira	U.S. House of Representatives
Weerasinghe	Pamitha	Union of Concerned Scientists
Wise Thompson	Janie	U.S. House of Representatives

Maggie Sauerhage  
Office of Public Affairs  
U.S. Environmental Protection Agency  
Office: (202) 564-0443  
Cell: Ex. 6 Personal Privacy (PP)

Message

**From:** Joseph Bast [JBast@heartland.org]  
**Sent:** 10/11/2017 8:35:50 PM  
**Subject:** Where PM2.5 comes from, and why it matters  
**Attachments:** PM25\_monvalue2016.xlsx

A standard talking point in the global warming debate is that most carbon dioxide comes from natural sources, the human contribution is tiny by comparison. A parallel point in the air quality debate is 75% of PM2.5 comes from natural sources (probably much more than this, but this is government numbers). Rich Trzupek provides some illumination in his remarks below.

Joe

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**From:** Richard Trzupek [mailto:rtrzupek@trinityconsultants.com]  
**Sent:** Wednesday, October 11, 2017 3:29 PM  
**To:** Joseph Bast  
**Subject:** RE: PM2.5 and CPP repeal

Joe,

I promised to pass the following along to Steve, but totally forgot. Please pass it along to at least him and feel free to share with the whole posse if you like.

There have been subtle, unintended consequences of the 12 ug/M annual standard. People don't understand how incredibly stringent that standard is, nor where PM 2.5 comes from. Here's a table I put together as part of my testimony before the House Energy and Environment Committee a few years back:

NATIONAL EMISSIONS SUMMARY: PM-2.5		
EMISSIONS SOURCE (USEPA TIER1 NAME)	EMISSIONS (TONS/YEAR)	% OF TOTAL
FUEL COMB. ELEC. UTIL.	308,738	5.04%
FUEL COMB. INDUSTRIAL	147,494	2.41%
FUEL COMB. OTHER	369,590	6.04%
CHEMICAL & ALLIED PRODUCT MFG	20,678	0.34%
METALS PROCESSING	63,484	1.04%
PETROLEUM & RELATED INDUSTRIES	23,126	0.38%
OTHER INDUSTRIAL PROCESSES	350,472	5.72%
SOLVENT UTILIZATION	3,551	0.06%
STORAGE & TRANSPORT	22,067	0.36%
WASTE DISPOSAL & RECYCLING	205,004	3.35%
HIGHWAY VEHICLES	295,373	4.82%
OFF-HIGHWAY	301,179	4.92%
MISCELLANEOUS	4,012,455	65.53%
TOTAL:	6,123,211	100.00%

Total Industrial:

24.73%

Total Non Industrial:

75.27%

The above data comes from USEPA National Emissions Inventory. Clearly, if you think PM 2.5 is a problem, it's not an industry related problem. "Miscellaneous" in this case is code for "Natural Sources", a term they don't want to use because ma nature is supposed to be perfect.

Now let's look at the kind of places that can't meet the PM 2.5 standard. Here's a summary of PM 2.5 concentrations from all 140 monitors in the state of California for 2016, ranked by annual average PM 2.5 concentration:

EPA Region	State	County	City	Weighted Arithmetic Mean (annual)
9	CA	Kern	Bakersfield	16
9	CA	Kern	Bakersfield	15.9
9	CA	Kings	Hanford	15.5
9	CA	Kern	Bakersfield	14.8
9	CA	Kings	Corcoran	14.8
9	CA	San Bernardino	Ontario	14.8
9	CA	Tulare	Visalia	14.7
9	CA	Sacramento	Sacramento	14.6
9	CA	Kern	Bakersfield	14.5
9	CA	Riverside	Mira Loma	14.3
9	CA	Riverside	Mira Loma	14.1
9	CA	Plumas	Portola	13.9
9	CA	Fresno	Fresno	13.6
9	CA	San Joaquin	Stockton	13.6
9	CA	Fresno	Fresno	13.5
9	CA	Fresno	Fresno	13
9	CA	Fresno	Clovis	12.8
9	CA	Fresno	Fresno	12.7
9	CA	San Bernardino	Fontana	12.7
9	CA	Riverside	Rubidoux	12.6
9	CA	Riverside	Rubidoux	12.6
9	CA	San Bernardino	Fontana	12.6
9	CA	Stanislaus	Not in a City	12.6
9	CA	Imperial	Calexico	12.5
9	CA	Imperial	Calexico	12.5
9	CA	Fresno	Fresno	12.4
9	CA	Plumas	Portola	12.3
9	CA	Los Angeles	Los Angeles	12
9	CA	Los Angeles	Long Beach	12
9	CA	Madera	Madera	12
9	CA	Merced	Not in a City	11.9
9	CA	Los Angeles	Los Angeles	11.8
9	CA	Los Angeles	Pico Rivera	11.7
9	CA	San Joaquin	Stockton	11.7
9	CA	Fresno	Clovis	11.6
9	CA	Imperial	Brawley	11.3
9	CA	Merced	Merced	11.2
9	CA	Los Angeles	Compton	11.1

9	CA	San Bernardino	San Bernardino	11.1
9	CA	Stanislaus	Modesto	11.1
9	CA	Riverside	Banning	10.5
9	CA	Los Angeles	Long Beach	10.3
9	CA	Madera	Madera	10.2
9	CA	Los Angeles	Azusa	10.1
9	CA	San Diego	El Cajon	9.9
9	CA	San Joaquin	Not in a City	9.8
9	CA	San Diego	San Diego	9.7
9	CA	Los Angeles	Long Beach	9.6
9	CA	Riverside	Not in a City	9.6
9	CA	Ventura	Thousand Oaks	9.6
9	CA	Imperial	El Centro	9.5
9	CA	Los Angeles	Pasadena	9.5
9	CA	Orange	Anaheim	9.4
9	CA	Los Angeles	Reseda	9.2
9	CA	Santa Clara	San Jose	9.1
9	CA	Ventura	Ojai	9.1
9	CA	San Luis Obispo	San Luis Obispo	9
9	CA	Plumas	Quincy	8.8
9	CA	Alameda	Oakland	8.7
9	CA	Alameda	Oakland	8.7
9	CA	Sacramento	Arden-Arcade	8.7
9	CA	San Diego	Chula Vista	8.7
9	CA	Ventura	Simi Valley	8.7
9	CA	Stanislaus	Modesto	8.6
9	CA	Ventura	Simi Valley	8.6
9	CA	Napa	Napa	8.5
9	CA	Solano	Vallejo	8.5
9	CA	Santa Clara	San Jose	8.4
9	CA	Sacramento	Arden-Arcade	8.3
9	CA	San Mateo	Redwood City	8.3
9	CA	San Luis Obispo	Arroyo Grande	8.2
9	CA	Ventura	Piru	8.2
9	CA	Calaveras	San Andreas	8.1
9	CA	Contra Costa	San Pablo	8.1
9	CA	Sutter	Yuba City	8.1
9	CA	Ventura	Not in a City	8.1
9	CA	Santa Clara	San Jose	8
9	CA	Fresno	Not in a City	7.9
9	CA	San Diego	San Diego	7.8
9	CA	Butte	Chico	7.7
9	CA	Fresno	Not in a City	7.7
9	CA	Los Angeles	Lancaster	7.7
9	CA	Placer	Roseville	7.7



9	CA	Riverside	Indio	7.7
9	CA	Sacramento	Sacramento	7.7
9	CA	San Diego	San Diego	7.6
9	CA	Alameda	Livermore	7.5
9	CA	San Bernardino	Victorville	7.5
9	CA	San Diego	Pala	7.5
9	CA	San Francisco	San Francisco	7.5
9	CA	Kern	Mojave	7.4
9	CA	San Diego	El Cajon	7.4
9	CA	Solano	Vallejo	7.4
9	CA	Orange	Mission Viejo	7.3
9	CA	Alameda	Not in a City	7.1
9	CA	Riverside	Not in a City	7.1
9	CA	Sacramento	Sacramento	7.1
9	CA	Santa Barbara	Goleta	7.1
9	CA	Santa Barbara	Santa Maria	7
9	CA	Santa Barbara	Lompoc	7
9	CA	Placer	Roseville	6.9
9	CA	Monterey	Carmel Valley Village	6.8
9	CA	Sacramento	Folsom	6.8
9	CA	San Bernardino	Big Bear City	6.8
9	CA	Inyo	Keeler	6.6
9	CA	Marin	San Rafael	6.4
9	CA	Mendocino	Ukiah	6.4
9	CA	Yolo	Woodland	6.4
9	CA	Colusa	Colusa	6.3
9	CA	Riverside	Banning	6.3
9	CA	San Luis Obispo	Atascadero	6.3
9	CA	Nevada	Truckee	6.2
9	CA	Alameda	Oakland	6.1
9	CA	Colusa	Cortina Indian Rancheria	6.1
9	CA	Humboldt	Eureka	6.1
9	CA	Mendocino	Willits	6.1
9	CA	Monterey	Salinas	6.1
9	CA	Contra Costa	Concord	5.9
9	CA	Placer	Auburn	5.9
9	CA	San Luis Obispo	Nipomo	5.8
9	CA	Kern	Ridgecrest	5.7
9	CA	Sacramento	Folsom	5.7
9	CA	Santa Clara	Gilroy	5.6
9	CA	Riverside	Palm Springs	5.5
9	CA	Monterey	Salinas	5.3
9	CA	Santa Cruz	Live Oak	5.3
9	CA	Monterey	King City	5.2
9	CA	Santa Cruz	Not in a City	5.2

9	CA	Shasta	Redding	5.2
9	CA	Inyo	Keeler	5
9	CA	San Diego	Boulevard	5
9	CA	Siskiyou	Yreka	4.9
9	CA	San Bernardino	Victorville	4.7
9	CA	Nevada	Grass Valley	4.6
9	CA	Sonoma	Sebastopol	4.6
9	CA	San Benito	Hollister	4.3
9	CA	Tehama	Red Bluff	4.2
9	CA	Inyo	Not in a City	4
9	CA	Humboldt	Not in a City	3.5
9	CA	Lake	Lakeport	3

The exceedences occur in places like Fresno,, Bakersfield and Stockton, cities well distant from the urban sprawl of Los Angeles and San Francisco. These are towns in predominantly rural areas. (Full spreadsheet attached for anyone that wants it).

Contrast that with the three monitors in Long Beach, site of the second busiest container port in the United States. There is ton of ship, rail and truck traffic there, along with heavy equipment. Yet, despite that, one of the Long Beach monitors came in right at 12, while the other two were at 10.3 and 9.6.

This stupid standard needlessly complicates projects. Say you run a hospital and you want to put in a 500 kW natural gas fired stand-by generator. The regulatory authority says “fine, but you have to perform dispersion modeling first to show me you won’t violate any NAAQS. You do the modeling and you fail for PM 2.5. Not because you have that much PM 2.5 emissions. Using standard EPA factors, you’re generator will emit about 0.07 lbs/hr of PM 2.5. However, 0.07 lbs hr is 3 million micrograms per hour and if that generator is too close the fence line, you’ll never get enough dispersion to pass modeling – and that’s with a *natural gas fired* generator. This kind of stuff happens all the time with the ridiculous NAAQS set under Obama’s EPA. (The short term NO2 standard is goofy as well).

Ultimately this is another case of classic big government: trying to solve a problem that doesn’t exist by regulating those who have nothing to do with it!

Cheers,

Rcih

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**From:** Joseph Bast [mailto:JBast@heartland.org]

**Sent:** Wednesday, October 11, 2017 1:07 PM

**Subject:** PM2.5 and CPP repeal

Friends,

At the most recent Red Team briefing hosted by The Heartland Institute, we talked about how important the air quality debate is to the global warming debate. The Obama administration used exaggerated estimates of the negative health effects of particulate matter (PM2.5) to make its benefit-cost analysis of the Clean Power Plan come out positive. Indeed, most of the war on fossil fuels was conducted in the name of reducing “criterion pollutants,” substances already regulated under the Clean Air Act. Unless we oppose junk science in that field, our victories against AGW alarmism won’t change public policy (much).

Only a few brave souls have been opposing EPA's junk science in the air quality arena, among them Steve Milloy, James Enstrom, John Dunn, and Stan Young. (No disrespect meant to others on this list who contributed as well... let me know who you are so I can put you to work.) Repeal of the Clean Power Plan is a tribute to their courage, hard work, and perseverance.

In his message below, one of these heroes, Steve Milloy, explains how Scott Pruitt justified repeal by specifically challenging the alleged health effects of exposure to PM2.5 *below* the already-too-strict air quality standards. As Steve says, it's a clever trick. Steve's explanation is below.

Now go outside and roll around in the grass for a while! It's a good day to celebrate!

Joe

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**From:** Steve Milloy Ex. 6 Personal Privacy (PP)  
**Sent:** Wednesday, October 11, 2017 8:54 AM  
**To:** Joseph Bast  
**Cc:**  
**Subject:** Re: PM2.5 and CPP repeal

Same chart annotated below.

Look at circled numbers as an example.

Ignore the table headers, they are worded correctly but are unnecessarily confusing (no doubt by Obama holdovers).

Cost of rule by 2030 with 3% discount rate is \$27.2 billion.

Under assumption that PM2.5 kills, benefits of rule are as much as \$55.5 billion. So then net benefits of rule (just from PM2.5) are as much as \$28.3 billion (\$55.5 billion minus \$27.2 billion).

Under assumption that PM2.5 kills no one below existing PM2.5 NAAQS standard, benefits are only \$26.5 billion —i.e., \$29 billion less than the PM2.5 kills scenario. So then net benefits of rule are turned into a net cost of \$0.7 billion (\$26.5 billion - \$27.2 billion).

The reason there are still any remaining benefits from PM2.5 reductions is because the Pruitt EPA still assumes that PM2.5 kills at levels above the PM2.5 NAAQS. This assumption is wrong, but the Pruitt EPA is only changing its view of PM2.5 to the extent it needs to. It's actually somewhat of a clever trick.

The PM2.5 NAAQS set by Obama in 2012 (at 12 micrograms/cubic meter, down from the previous standard of 15) is by law supposed to represent "safe" air. So if the PM2.5 NAAQS of 12 represents "safe" air, then there are no deaths below 12 — and so no benefits that can be monetized.

Steve

**Table 1 - Monetized Forgone Benefits, Avoided Compliance Costs, and Net Benefits based on Rate-Based Approach from 2015 CPP RIA (billions of 2011\$)**

Year	Discount Rate	Benefit of Repeal: Avoided Costs	Cost of Repeal: Forgone Benefits		Net Benefits of Repeal	
			Low	High	Low	High
Forgone Health Co-Benefits (Full Range of Ambient PM <sub>2.5</sub> Concentrations)						
2020	3%	\$3.7	\$2.3	\$3.4	\$0.3	\$1.4
	7%	\$4.2	\$1.9	\$3.0	\$1.2	\$2.3
2025	3%	\$10.2	\$18.0	\$28.4	(\$18.1)	(\$7.8)
	7%	\$14.1	\$16.2	\$25.6	(\$11.5)	(\$2.0)
2030	3%	\$27.2	\$35.8	\$55.5	(\$28.3)	(\$8.6)
	7%	\$33.3	\$32.2	\$50.2	(\$16.9)	\$1.1
Forgone Health Co-Benefits (PM <sub>2.5</sub> Benefits Fall to Zero Below LML)						
2020	3%	\$3.7	\$2.2	\$2.8	\$0.9	\$1.5
	7%	\$4.2	\$1.9	\$2.4	\$1.8	\$2.3
2025	3%	\$10.2	\$17.5	\$20.7	(\$10.5)	(\$7.3)
	7%	\$14.1	\$15.7	\$18.7	(\$4.6)	(\$1.6)
2030	3%	\$27.2	\$34.8	\$40.7	(\$13.5)	(\$7.6)
	7%	\$33.3	\$31.3	\$36.9	(\$3.6)	\$2.0
Forgone Health Co-Benefits (PM <sub>2.5</sub> Benefits Fall to Zero Below NAAQS)						
2020	3%	\$3.7	\$1.7	\$2.1	\$1.5	\$2.0
	7%	\$4.2	\$1.4	\$1.8	\$2.4	\$2.8
2025	3%	\$10.2	\$11.4	\$13.3	(\$3.1)	(\$1.1)
	7%	\$14.1	\$10.2	\$12.1	\$2.1	\$4.0
2030	3%	\$27.2	\$23.0	\$26.5	\$0.7	\$4.2
	7%	\$33.3	\$20.7	\$24.1	\$9.2	\$12.7

Note: Forgone benefits include forgone climate, energy efficiency, and air quality benefits. The range of benefits presented here reflects several alternative assumptions regarding the risk of PM-related premature death, ranging from the assumption that populations are at risk of PM-related premature death at all levels of PM<sub>2.5</sub> to the assumption that the risk of PM<sub>2.5</sub>-related death falls to zero below the annual NAAQS (12µg/m<sup>3</sup>).

<b>EPA Region</b>	<b>State</b>	<b>County</b>	<b>City</b>
9	CA	Kern	Bakersfield
9	CA	Kern	Bakersfield
9	CA	Kings	Hanford
9	CA	Kern	Bakersfield
9	CA	Kings	Corcoran
9	CA	San Bernardino	Ontario
9	CA	Tulare	Visalia
9	CA	Sacramento	Sacramento
9	CA	Kern	Bakersfield
9	CA	Riverside	Mira Loma
9	CA	Riverside	Mira Loma
9	CA	Plumas	Portola
9	CA	Fresno	Fresno
9	CA	San Joaquin	Stockton
9	CA	Fresno	Fresno
9	CA	Fresno	Fresno
9	CA	Fresno	Clovis
9	CA	Fresno	Fresno
9	CA	San Bernardino	Fontana
9	CA	Riverside	Rubidoux
9	CA	Riverside	Rubidoux
9	CA	San Bernardino	Fontana
9	CA	Stanislaus	Not in a City
9	CA	Imperial	Calexico
9	CA	Imperial	Calexico
9	CA	Fresno	Fresno
9	CA	Plumas	Portola
9	CA	Los Angeles	Los Angeles
9	CA	Los Angeles	Long Beach
9	CA	Madera	Madera
9	CA	Merced	Not in a City
9	CA	Los Angeles	Los Angeles
9	CA	Los Angeles	Pico Rivera
9	CA	San Joaquin	Stockton
9	CA	Fresno	Clovis
9	CA	Imperial	Brawley
9	CA	Merced	Merced
9	CA	Los Angeles	Compton
9	CA	San Bernardino	San Bernardino
9	CA	Stanislaus	Modesto
9	CA	Riverside	Banning
9	CA	Los Angeles	Long Beach
9	CA	Madera	Madera
9	CA	Los Angeles	Azusa
9	CA	San Diego	El Cajon

<b>CBSA</b>
Bakersfield, CA
Bakersfield, CA
Hanford-Corcoran, CA
Bakersfield, CA
Hanford-Corcoran, CA
Riverside-San Bernardino-Ontario, CA
Visalia-Porterville, CA
Sacramento--Roseville--Arden-Arcade, CA
Bakersfield, CA
Riverside-San Bernardino-Ontario, CA
Riverside-San Bernardino-Ontario, CA
Fresno, CA
Stockton-Lodi, CA
Fresno, CA
Fresno, CA
Fresno, CA
Fresno, CA
Riverside-San Bernardino-Ontario, CA
Riverside-San Bernardino-Ontario, CA
Riverside-San Bernardino-Ontario, CA
Riverside-San Bernardino-Ontario, CA
Modesto, CA
El Centro, CA
El Centro, CA
Fresno, CA
Los Angeles-Long Beach-Anaheim, CA
Los Angeles-Long Beach-Anaheim, CA
Madera, CA
Merced, CA
Los Angeles-Long Beach-Anaheim, CA
Los Angeles-Long Beach-Anaheim, CA
Stockton-Lodi, CA
Fresno, CA
El Centro, CA
Merced, CA
Los Angeles-Long Beach-Anaheim, CA
Riverside-San Bernardino-Ontario, CA
Modesto, CA
Riverside-San Bernardino-Ontario, CA
Los Angeles-Long Beach-Anaheim, CA
Madera, CA
Los Angeles-Long Beach-Anaheim, CA
San Diego-Carlsbad, CA

Address	Site ID	POC	Exc Events	Obs
5558 California Ave., Bakersfield Ca 93309	60290014	2	None	35
410 E. Planz Rd. Bakersfield, Ca 93307	60290016	1	None	100
807 South Irwin St., Hanford	60311004	3	None	361
2820 M St., Bakersfield, Ca 93301	60290010	1	None	117
1520 Patterson Ave.	60310004	1	None	119
2330 S. Castle Harbour	60710027	1	Included	348
310 N Church St, Visalia	61072002	1	None	118
100 Bercut Drive, Sacramento	60670015	1	None	10
5558 California Ave., Bakersfield Ca 93309	60290014	1	None	327
5130 Poinsettia Place	60658005	2	Included	58
5130 Poinsettia Place	60658005	1	Included	351
420 Gulling Street, Portola, Ca 96122	60631010	1	None	114
3727 N First St, Fresno	60190011	4	None	349
Hazelton-Hd, Stockton	60771002	4	None	318
3727 N First St, Fresno	60190011	3	None	353
1716 Winery, Fresno Ca 93726	60195025	1	None	120
908 N Villa Ave, Clovis	60195001	3	None	340
3727 N First St, Fresno	60190011	1	None	355
14360 Arrow Blvd., Fontana	60712002	1	Included	76
5888 Mission Blvd., Rubidoux	60658001	1	Included	358
5888 Mission Blvd., Rubidoux	60658001	2	Included	60
14360 Arrow Blvd., Fontana	60712002	21	None	36
900 S Minaret Street, Turlock, Ca	60990006	3	None	351
1029 Ethel St, Callexico High School	60250005	1	None	339
1029 Ethel St, Callexico High School	60250005	2	None	31
3727 N First St, Fresno	60190011	2	Included	30
420 Gulling Street, Portola, Ca 96122	60631010	2	None	31
1630 N Main St, Los Angeles	60371103	2	None	56
5895 Long Beach Blvd.	60374008	1	None	352
28261 Avenue 14 Madera Ca 93638	60392010	3	None	361
385 S. Coffee Avenue, Merced, Ca 95340	60470003	3	None	356
1630 N Main St, Los Angeles	60371103	1	None	355
4144 San Gabriel River Pkwy, Pico Rivera	60371602	1	None	120
Hazelton-Hd, Stockton	60771002	3	None	344
908 N Villa Ave, Clovis	60195001	1	None	121
220 Main St., Ste 204, Brawley	60250007	1	None	123
2334 'M' St. Merced, Ca	60472510	1	None	116
700 North Bullis Road	60371302	1	None	115
24302 4th St., San Bernardino, Ca.	60719004	1	Included	114
814 14th St., Modesto	60990005	3	None	356
12160 Santiago Rd. Banning, Ca 92220	60651016	1	Included	345
3648 N. Long Beach Blvd., Long Beach	60374002	1	None	356
28261 Avenue 14 Madera Ca 93638	60392010	1	None	56
803 N. Loren Ave., Azusa	60370002	1	None	122
533 First Street	60731022	1	None	186

First Max (24 h)	2nd Max (24 h)	3rd Max (24 h)	4th Max (24 h)	98th Percentile (24 h)	Weighted Arithmetic Mean (annual)
54.6	46.5	44	40.3	55	16
51.4	50.7	47.7	44.5	51	15.9
59.7	51.3	51	50.9	43	15.5
53.9	52.7	51.4	48.8	51	14.8
56.5	46.4	45.9	42.1	46	14.8
49.5	44.1	41.6	38.5	36	14.8
48	43	40.7	39.3	41	14.7
26.6	23.5	22.8	22.1	27	14.6
66.4	63.6	55.7	49.8	47	14.5
47.1	39.5	37.6	29.2	40	14.3
47.2	45.6	40.1	39	35	14.1
57.2	47.1	45.6	44.2	46	13.9
53.8	50.4	50.3	47.7	42	13.6
40.8	38.1	36.2	34.6	31	13.6
53.5	53.5	50.6	49.9	43	13.5
48.6	41.8	40	38.1	40	13
50.4	46.2	45.2	45	38	12.8
52.7	50.7	49.4	48.9	43	12.7
58.8	28.9	26.2	25.6	29	12.7
51.5	39.1	38.3	37.7	32	12.6
51.6	36.2	27.4	24.7	36	12.6
30.4	22.4	20.8	18.8	30	12.6
53.6	52.2	47.2	42.6	39	12.6
45.3	42.5	39.5	36.5	34	12.5
33.8	28.1	24.8	23.8	34	12.5
47.5	33.8	24.9	22.7	48	12.4
46.1	44.5	23.7	23.2	46	12.3
42.4	38.8	26.7	25.6	39	12
33.3	31.1	30.4	30.2	26	12
47.7	42	38.2	37	36	12
43	43	41.7	38.5	33	11.9
44.3	39.8	34.2	33.2	27	11.8
46.5	37	25.1	20.6	25	11.7
43.7	41.6	37.6	35.7	33	11.7
36.1	33	31.5	31.2	32	11.6
57.9	40	32.3	31.7	32	11.3
42.8	36.3	34.6	33.6	35	11.2
36.3	28	26.3	26.3	26	11.1
53.5	32.5	32.5	27.1	33	11.1
53.3	45.5	40.5	37.5	36	11.1
31.5	28	26.6	24.9	24	10.5
29.3	28.9	27.2	26.2	24	10.3
33	32.9	27.6	23.2	33	10.2
32.1	30.3	29	26	29	10.1
23.9	22	18	17.3	17	9.9



9	CA	San Joaquin	Not in a City
9	CA	San Diego	San Diego
9	CA	Los Angeles	Long Beach
9	CA	Riverside	Not in a City
9	CA	Ventura	Thousand Oaks
9	CA	Imperial	El Centro
9	CA	Los Angeles	Pasadena
9	CA	Orange	Anaheim
9	CA	Los Angeles	Reseda
9	CA	Santa Clara	San Jose
9	CA	Ventura	Ojai
9	CA	San Luis Obispo	San Luis Obispo
9	CA	Plumas	Quincy
9	CA	Alameda	Oakland
9	CA	Alameda	Oakland
9	CA	Sacramento	Arden-Arcade
9	CA	San Diego	Chula Vista
9	CA	Ventura	Simi Valley
9	CA	Stanislaus	Modesto
9	CA	Ventura	Simi Valley
9	CA	Napa	Napa
9	CA	Solano	Vallejo
9	CA	Santa Clara	San Jose
9	CA	Sacramento	Arden-Arcade
9	CA	San Mateo	Redwood City
9	CA	San Luis Obispo	Arroyo Grande
9	CA	Ventura	Piru
9	CA	Calaveras	San Andreas
9	CA	Contra Costa	San Pablo
9	CA	Sutter	Yuba City
9	CA	Ventura	Not in a City
9	CA	Santa Clara	San Jose
9	CA	Fresno	Not in a City
9	CA	San Diego	San Diego
9	CA	Butte	Chico
9	CA	Fresno	Not in a City
9	CA	Los Angeles	Lancaster
9	CA	Placer	Roseville
9	CA	Riverside	Indio
9	CA	Sacramento	Sacramento
9	CA	San Diego	San Diego
9	CA	Alameda	Livermore
9	CA	San Bernardino	Victorville
9	CA	San Diego	Pala
9	CA	San Francisco	San Francisco
9	CA	Kern	Mojave
9	CA	San Diego	El Cajon

Stockton-Lodi, CA
San Diego-Carlsbad, CA
Los Angeles-Long Beach-Anaheim, CA
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Oxnard-Thousand Oaks-Ventura, CA
El Centro, CA
Los Angeles-Long Beach-Anaheim, CA
Los Angeles-Long Beach-Anaheim, CA
Los Angeles-Long Beach-Anaheim, CA
San Jose-Sunnyvale-Santa Clara, CA
Oxnard-Thousand Oaks-Ventura, CA
San Luis Obispo-Paso Robles-Arroyo Grande, CA
San Francisco-Oakland-Hayward, CA
San Francisco-Oakland-Hayward, CA
Sacramento--Roseville--Arden-Arcade, CA
San Diego-Carlsbad, CA
Oxnard-Thousand Oaks-Ventura, CA
Modesto, CA
Oxnard-Thousand Oaks-Ventura, CA
Napa, CA
Vallejo-Fairfield, CA
San Jose-Sunnyvale-Santa Clara, CA
Sacramento--Roseville--Arden-Arcade, CA
San Francisco-Oakland-Hayward, CA
San Luis Obispo-Paso Robles-Arroyo Grande, CA
Oxnard-Thousand Oaks-Ventura, CA
San Francisco-Oakland-Hayward, CA
Yuba City, CA
Oxnard-Thousand Oaks-Ventura, CA
San Jose-Sunnyvale-Santa Clara, CA
Fresno, CA
San Diego-Carlsbad, CA
Chico, CA
Fresno, CA
Los Angeles-Long Beach-Anaheim, CA
Sacramento--Roseville--Arden-Arcade, CA
Riverside-San Bernardino-Ontario, CA
Sacramento--Roseville--Arden-Arcade, CA
San Diego-Carlsbad, CA
San Francisco-Oakland-Hayward, CA
Riverside-San Bernardino-Ontario, CA
San Diego-Carlsbad, CA
San Francisco-Oakland-Hayward, CA
Bakersfield, CA
San Diego-Carlsbad, CA

530 Fishback Road Manteca, Ca	60772010	3	None	356
1110 Beardsley Street, San Diego, Ca 92112	60731010	1	None	209
1305 E. Pacific Coast Hwy., Long Beach	60374004	1	None	350
12705 Pechanga Rd., Temecula, Ca 92592	60650009	1	None	310
2323 Moorpark Road, Thousand Oaks, Ca 91360	61110007	3	None	362
150 9th St., El Centro	60251003	1	None	122
752 S. Wilson Ave., Pasadena	60372005	1	None	119
1630 W. Pampas Lane	60590007	1	None	349
18330 Gault St., Reseda	60371201	1	None	113
1007 Knox Ave	60850006	3	None	361
1201 E. Ojai Avenue, Ojai, Ca 93023	61111004	3	None	339
3220 South Higuera Street, San Luis Obispo	60792006	3	None	188
267 N. Church St., Quincy, Ca. 95971	60631006	1	None	352
1100 21st Street	60010011	3	None	327
Laney College Eighth St. Parking Lot Aisle J	60010012	3	None	362
Del Paso-2701 Avalon Dr, Sacramento	60670006	1	None	346
80 E. 'J' St., Chula Vista	60730001	1	None	120
5400 Cochran Street, Simi Valley, Ca 93063	61112002	3	None	361
814 14th St., Modesto	60990005	1	None	31
5400 Cochran Street, Simi Valley, Ca 93063	61112002	4	None	360
2552 Jefferson Ave.	60550003	3	None	348
304 Tuolumne St.	60950004	4	None	342
158b Jackson St	60850005	3	None	355
Del Paso-2701 Avalon Dr, Sacramento	60670006	2	None	30
897 Barron Ave.	60811001	3	None	352
2391 Willow Road, Arroyo Grande, California	60792007	1	None	355
3301 Pacific Avenue, Piru, Ca 93040	61110009	3	None	360
501 Gold Strike Road, San Andreas	60090001	3	None	346
1865 D Rumrill Blvd, San Pablo	60131004	3	None	338
773 Almond St, Yuba City	61010003	1	None	351
545 Central Avenue, Oxnard, Ca 93030	61113001	3	None	349
158b Jackson St	60850005	1	None	95
Milerton Road And Winchell Cove Road	60190500	1	Included	306
6125a Kearny Villa Rd., San Diego	60731016	2	None	58
984 East Avenue, Chico	60070008	1	None	328
32650 West Adams Avenue Tranquillity Ca 93668	60192009	3	None	340
43301 Division St., Lancaster, Ca	60379033	1	None	358
151 No Sunrise Blvd, Roseville, Ca	60610006	2	None	30
46-990 Jackson St., Indio	60652002	1	None	115
1309 T St., Sacramento, Ca. 95814	60670010	1	None	116
6125a Kearny Villa Rd., San Diego	60731016	1	None	122
793 Rincon Ave.	60010007	3	None	359
14306 Park Ave., Victorville, Ca	60710306	1	None	360
10848 Hwy 76, Pala, Ca 92059	60731201	1	Included	352
10 Arkansas St.	60750005	3	None	348
923 Poole Street, Mojave, Ca 93501	60290011	3	None	353
10537 Floyd Smith Drive	60731018	1	None	50

50.8	39.4	38	37.1	29	9.8
34.4	29.1	23.9	21.7	21	9.7
28.9	28.7	28.1	25.9	22	9.6
18.9	18.7	18.5	18.2	17	9.6
35.2	27.2	23.8	22.4	19	9.6
31.3	31.3	25.8	23.4	26	9.5
29.2	27.8	25.3	22.7	25	9.5
44.4	33.8	32	27.1	24	9.4
30	26.4	24.5	24.4	25	9.2
26.5	24.4	22.2	21.2	19	9.1
28.9	21.7	21.1	21	16	9.1
21	20.9	20.5	19	19	9
37.1	34.9	33.9	33.3	29	8.8
23.9	22	21.9	21.7	19	8.7
20.2	19.7	18.2	18	18	8.7
46.8	37.3	35.6	34.2	28	8.7
23.9	20.2	17.9	15.1	18	8.7
34.9	31.4	24.2	21.8	19	8.7
32.4	18.5	16.2	13.2	32	8.6
35.3	29	23.8	22.9	19	8.6
24.3	24.2	23.3	22.9	22	8.5
22.4	21	20.1	20	19	8.5
22.6	21.8	19.7	19.2	19	8.4
26.7	22.6	15.8	14	27	8.3
19.5	18.4	18.3	17.7	17	8.3
32.5	30.2	29.3	27.6	24	8.2
26.7	22.7	21.5	21.5	19	8.2
27.6	23.1	21.7	21.5	20	8.1
19.5	18	17.6	16.9	16	8.1
40.1	33.8	31.4	27.1	22	8.1
22.7	18.5	18	17	16	8.1
22.7	20.3	19.4	15.8	20	8
33.7	32.1	25.9	23.5	21	7.9
20.3	12.8	12.7	12.3	13	7.8
37.2	26.8	23.8	23.7	21	7.7
39.7	35.8	32.1	28.5	27	7.7
64.8	49.1	33.3	30.1	21	7.7
20.9	20	18.7	13.8	21	7.7
25.8	15.1	15	14.3	15	7.7
24.4	24.2	23.7	23.4	24	7.7
19.4	13.5	13	12.9	13	7.6
22.3	19.6	18	17	16	7.5
41.5	25.1	22.8	21.8	18	7.5
23.5	16.7	16.2	14.8	14	7.5
19.6	19.3	19.1	17.5	17	7.5
25.7	23.8	23	22.8	21	7.4
19.3	14	13.1	11.6	19	7.4

9	CA	Solano	Vallejo
9	CA	Orange	Mission Viejo
9	CA	Alameda	Not in a City
9	CA	Riverside	Not in a City
9	CA	Sacramento	Sacramento
9	CA	Santa Barbara	Goleta
9	CA	Santa Barbara	Santa Maria
9	CA	Santa Barbara	Lompoc
9	CA	Placer	Roseville
9	CA	Monterey	Carmel Valley Village
9	CA	Sacramento	Folsom
9	CA	San Bernardino	Big Bear City
9	CA	Inyo	Keeler
9	CA	Marin	San Rafael
9	CA	Mendocino	Ukiah
9	CA	Yolo	Woodland
9	CA	Colusa	Colusa
9	CA	Riverside	Banning
9	CA	San Luis Obispo	Atascadero
9	CA	Nevada	Truckee
9	CA	Alameda	Oakland
9	CA	Colusa	Cortina Indian Rancheria
9	CA	Humboldt	Eureka
9	CA	Mendocino	Willits
9	CA	Monterey	Salinas
9	CA	Contra Costa	Concord
9	CA	Placer	Auburn
9	CA	San Luis Obispo	Nipomo
9	CA	Kern	Ridgecrest
9	CA	Sacramento	Folsom
9	CA	Santa Clara	Gilroy
9	CA	Riverside	Palm Springs
9	CA	Monterey	Salinas
9	CA	Santa Cruz	Live Oak
9	CA	Monterey	King City
9	CA	Santa Cruz	Not in a City
9	CA	Shasta	Redding
9	CA	Inyo	Keeler
9	CA	San Diego	Boulevard
9	CA	Siskiyou	Yreka
9	CA	San Bernardino	Victorville
9	CA	Nevada	Grass Valley
9	CA	Sonoma	Sebastopol
9	CA	San Benito	Hollister
9	CA	Tehama	Red Bluff
9	CA	Inyo	Not in a City
9	CA	Humboldt	Not in a City

Vallejo-Fairfield, CA
Los Angeles-Long Beach-Anaheim, CA
San Francisco-Oakland-Hayward, CA
Riverside-San Bernardino-Ontario, CA
Sacramento--Roseville--Arden-Arcade, CA
Santa Maria-Santa Barbara, CA
Santa Maria-Santa Barbara, CA
Santa Maria-Santa Barbara, CA
Sacramento--Roseville--Arden-Arcade, CA
Salinas, CA
Sacramento--Roseville--Arden-Arcade, CA
Riverside-San Bernardino-Ontario, CA
Bishop, CA
San Francisco-Oakland-Hayward, CA
Ukiah, CA
Sacramento--Roseville--Arden-Arcade, CA
Riverside-San Bernardino-Ontario, CA
San Luis Obispo-Paso Robles-Arroyo Grande, CA
Truckee-Grass Valley, CA
San Francisco-Oakland-Hayward, CA
Eureka-Arcata-Fortuna, CA
Ukiah, CA
Salinas, CA
San Francisco-Oakland-Hayward, CA
Sacramento--Roseville--Arden-Arcade, CA
San Luis Obispo-Paso Robles-Arroyo Grande, CA
Bakersfield, CA
Sacramento--Roseville--Arden-Arcade, CA
San Jose-Sunnyvale-Santa Clara, CA
Riverside-San Bernardino-Ontario, CA
Salinas, CA
Santa Cruz-Watsonville, CA
Salinas, CA
Santa Cruz-Watsonville, CA
Redding, CA
Bishop, CA
San Diego-Carlsbad, CA
Riverside-San Bernardino-Ontario, CA
Truckee-Grass Valley, CA
Santa Rosa, CA
San Jose-Sunnyvale-Santa Clara, CA
Red Bluff, CA
Bishop, CA
Eureka-Arcata-Fortuna, CA

304 Tuolumne St.	60950004	3	None	350
26081 Via Pera, Mission Viejo, Ca 92691	60592022	1	None	117
1 Bolivar Dr	60010013	3	None	162
12705 Pechanga Rd., Temecula, Ca 92592	60650009	2	None	43
Hlth Ctr-2221 Stockton Blvd, Sacramento	60674001	1	None	102
380 N Fairview Avenue, Goleta	60832011	1	None	331
906 S Broadway - Santa Maria	60831008	3	None	349
128 S 'H' St, Lompoc	60832004	1	None	337
151 No Sunrise Blvd, Roseville, Ca	60610006	1	None	58
35 Ford Road	60530002	3	Included	355
50 Natoma Street, Folsom	60670012	3	None	348
501 W. Valley Blvd., Big Bear City,	60718001	1	None	55
Keeler, 190 Cerro Gordo Road	60271003	3	None	359
534 4th St.	60410001	3	None	346
105 N Main St, Ukiah, Ca 95482	60450006	3	None	362
41929 E. Gibson Road, Woodland	61131003	1	None	60
100 Sunrise Blvd., Colusa	60111002	1	None	60
12160 Santiago Rd. Banning, Ca 92220	60651016	2	Included	59
5599 Traffic Way, Atascadero Ca	60798002	3	None	356
Fs-10049 Donner Pass Rd, Truckee	60571001	1	None	114
9925 International Blvd	60010009	3	None	360
Cortina Indian Rancheria, Spring Valley Rd, Williams	60110007	1	Included	243
717 South Avenue	60231004	1	None	118
Willits Justice Center, 125 East Commercial Street, Willits, Ca 95490	60452002	3	None	339
867 E. Laurel Dr	60531003	2	None	57
2956-A Treat Boulevard	60130002	3	None	344
11645 Atwood Street, Auburn	60610003	1	Included	364
1300 Guadalupe Rd., Nipomo, Ca., 93444	60792004	1	None	359
100 West California Ave, Ridgecrest, Ca	60290015	1	None	49
50 Natoma Street, Folsom	60670012	4	None	347
9th & Princeville	60850002	3	None	352
Fs-590 Racquet Club Ave, Palm Springs	60655001	1	None	112
867 E. Laurel Dr	60531003	3	None	358
960 Bostwick Lane	60870007	3	None	356
415 Pearl Street	60530008	3	None	362
7179 Hacienda Way, Felton Ca 95018	60871005	3	None	358
Hlth Ctr-2630 Breslauer Way, Redding	60890004	1	None	56
Keeler, 190 Cerro Gordo Road	60271003	1	None	115
8 1/2 Crestwood Road, Boulevard, Ca 91905	60731011	3	Included	350
530 Foothill Dr., Yreka	60932001	1	None	58
14306 Park Ave., Victorville, Ca	60710306	2	None	236
200 Litton Dr., Grass Valley, Ca	60570005	1	None	59
103 Morris Street,	60970004	3	None	358
1979 Fairview Rd	60690002	3	None	352
1834 Walnut Street, Red Bluff, Ca 96080	61030007	3	Included	305
Wmrc/Ncore, 3000 E. Line St., Bishop, Ca. 93514	60270002	1	None	362
170 Meters Se Of Donna Dr. & Humboldt Hill Rd., Eureka, Ca	60231005	2	None	117

23	21	20.6	20.1	19	7.4
24.7	18.8	13.4	13.3	13	7.3
17.3	17.1	16	15.6	16	7.1
13.5	13.3	12.5	12.2	14	7.1
22.9	18.7	17.5	16.5	18	7.1
26	17.4	16.5	16.5	13	7.1
19.4	18.9	17.1	15.8	15	7
30.9	28.6	22	20.7	16	7
21.2	20.2	14.1	13.6	20	6.9
104.7	77	63.7	62.4	57	6.8
25.7	23.4	22.7	21.5	19	6.8
28.4	22.1	19.4	15.5	22	6.8
56.8	40.8	39.8	35.9	25	6.6
15.6	15	14.8	14.8	14	6.4
17.9	17.9	17	16.7	16	6.4
16.4	13.3	12.8	12.3	13	6.4
14.8	13	12.3	12.2	13	6.3
16.6	15.6	12.9	12.8	16	6.3
28.6	26.2	24.6	23.6	19	6.3
22.1	21	17.1	16.3	17	6.2
15.5	15.3	15.1	15	14	6.1
32.6	24.5	20.7	18	18	6.1
20	19.3	16.4	16.3	16	6.1
19.1	17.9	16.5	15.8	15	6.1
26.4	20.9	11.9	11.5	21	6.1
20.7	19.4	18.8	18.7	16	5.9
28.6	28.3	27.6	26.5	18	5.9
23	21.4	21.2	20.2	18	5.8
25.8	15.9	12.2	12	26	5.7
24.6	21.1	21.1	20.3	19	5.7
16	15.8	15.3	14.5	13	5.6
14.7	12.8	12.4	12.3	12	5.5
28.7	25	19.2	16	13	5.3
12.7	12.5	12.1	11.6	11	5.3
27.9	22.2	20.9	19.6	16	5.2
22.3	18.7	17.8	17.8	13	5.2
12.6	12.5	11.2	11	13	5.2
22	22	19	17	19	5
31.4	23.6	21.3	20	17	5
25.1	11.5	10.6	9.1	12	4.9
37	20.4	16.5	14.8	13	4.7
11.7	11.7	11.2	10.5	12	4.6
18.7	17.8	16	15.2	13	4.6
20.4	17.2	16.2	15	13	4.3
32	23.7	20.8	16.4	15	4.2
19.8	18.6	18.4	14.4	13	4
10	10	9.5	8	10	3.5



9	CA	Lake	Lakeport
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Clearlake, CA

905 Lakeport Blvd., Lakeport	60333001	1	None	61
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9.3	9.2	7.8	5.7	9	3
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Message

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**From:** Joseph Bast [JBast@heartland.org]  
**Sent:** 9/9/2017 5:15:58 PM  
**Subject:** List of Candidates for the Clean Air Scientific Advisory Committee posted

Friends,

Steve Milloy alerted me to this... EPA has announced 43 candidates for its Clean Air Scientific Advisory Committee and is accepting comments on them until September 18: Here is part of the notice:

The SAB Staff Office received nominations for the attached 43 candidates based on their expertise and willingness to serve. We hereby invite public comments on the attached List of Candidates under consideration for appointment to the CASAC. Comments should be submitted to Mr. Aaron Yeow, Designated Federal Officer, at [yeow.aaron@epa.gov](mailto:yeow.aaron@epa.gov) no later than **September 18, 2017**. E-mail is the preferred mode of receipt. Please be advised that public comments are subject to release under the Freedom of Information Act.

The notice of comment period and bios of candidates are here:

<https://junkscience.com/wp-content/uploads/2017/08/CASAC-2017-List-of-Candidates.pdf>

Steve Milloy recommends only three candidates, and I heartily concur:

Tony Cox  
Robert F. Phalen  
Stan Young

You may notice they are also among the good guys who applied for positions on the Science Advisory Board. You can read Steve's post about the good and bad nominees here:

<https://junkscience.com/2017/09/action-alert-recommendations-for-epas-clean-air-scientific-advisory-committee/>

Joe

Joseph Bast  
Chief Executive Officer  
The Heartland Institute  
3939 N. Wilke Road  
Arlington Heights, IL 60004  
Phone Ex. 6 Personal Privacy (PP)  
Email [jbast@heartland.org](mailto:jbast@heartland.org)  
Web site <http://www.heartland.org>

[Support Heartland today!](#)

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Message

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**From:** Jim Lakely [JLakely@heartland.org]  
**Sent:** 6/13/2017 9:46:17 PM  
**To:** Konkus, John [konkus.john@epa.gov]  
**Subject:** Re: United States Resets Climate Change Discussion At G7 - Preview

John,

Heartland Research Fellow H. Sterling Burnett wrote about your press release today.

<http://blog.heartland.org/2017/06/pruitt-puts-america-first-at-g7-environment-summit/>

The first day of our mini-summit on EPA issues went well. We re-convene tomorrow morning at 9 a.m., if you and any other EPA folks are interested in stopping by.

Jim Lakely  
Director of Communications  
The Heartland Institute  
3939 North Wilke Road  
Arlington Heights, IL 60004

O:  
f: Ex. 6 Personal Privacy (PP)  
c:

Twitter: @HeartlandInst

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**From:** Jim Lakely <JLakely@heartland.org>  
**Date:** Tuesday, June 13, 2017 at 9:53 AM  
**To:** "Konkus, John" <konkus.john@epa.gov>  
**Subject:** Re: United States Resets Climate Change Discussion At G7 - Preview

Thanks. Will do.

And I certainly got my money's worth last night. Got to see Strasburg throw 100 pitches. It was in only 5 innings, but still ...

Best,

Jim Lakely  
Director of Communications  
The Heartland Institute  
3939 North Wilke Road  
Arlington Heights, IL 60004

O:  
f: Ex. 6 Personal Privacy (PP)  
c:

Twitter: @HeartlandInst

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**From:** "Konkus, John" <konkus.john@epa.gov>  
**Date:** Tuesday, June 13, 2017 at 9:36 AM  
**To:** Jim Lakely <JLakely@heartland.org>  
**Subject:** Re: United States Resets Climate Change Discussion At G7 - Preview

Crazy game indeed. Nats bullpen is not good. Yes please share as you have indicated.

Thank you!

John Konkus  
Environmental Protection Agency  
Deputy Associate Administrator for Public Affairs  
Mobile: Ex. 6 Personal Privacy (PP)

On Jun 13, 2017, at 9:34 AM, Jim Lakely <[JLakely@heartland.org](mailto:JLakely@heartland.org)> wrote:

Thanks, John. We got in just before 6 p.m. last night ... early enough that I was able to catch the Nats game last night. A wonderful park, and a crazy game.

Is it OK if I relate the information in this email in my opening remarks to the group this afternoon? I'll only say it comes from a "friend" or "source" in EPA.

Might we see others from EPA today or tomorrow?

Best,

Jim Lakely  
Director of Communications  
The Heartland Institute  
3939 North Wilke Road  
Arlington Heights, IL 60004

O:

f: Ex. 6 Personal Privacy (PP)

C:

Twitter: @HeartlandInst

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**From:** "Konkus, John" <[konkus.john@epa.gov](mailto:konkus.john@epa.gov)>

**Date:** Tuesday, June 13, 2017 at 7:54 AM

**To:** Jim Lakely <[JLakely@heartland.org](mailto:JLakely@heartland.org)>

**Subject:** RE: United States Resets Climate Change Discussion At G7 - Preview

Jim: I hope your travel to Washington was uneventful. I will be covering a Senate Hearing for a POTUS nominee today so will regretfully be unable to attend today's session. However, I wanted to share a few points that I hope, in part, guide today's conversations:

\*The Science Integrity meeting this week was postponed by EPA because of Dr. Gifo's illness. We certainly all wish her health and a speedy recovery. In the meantime, this pause provides all involved the opportunity to coordinate further to ensure the rescheduled meeting is productive and constructive. More industry, more conservative and a broader group of voices will be involved.

My understanding is that Dr. Grifo's illness is serious enough to cause this postponement, so we should all to be respectful of that.

\*Despite the intensity of the attacks from the left, EPA is managing massive changes and reforms. Barbs from the right hurt and hinder this progress. We need MORE support for our efforts. That will lead to much better working partnerships.

\*Our movement and our cause as defined by the Trump Presidency are helped by this group when it recognizes and echoes our achievements including:



>Getting beyond Paris.  
 >Restructuring the EPA around a back to basics agenda.  
 >Delivering a budget that would have been unthinkable under any other leadership.  
 >Moving over 25 significant OMB actions which is an amazing feat in this short amount of time, including: WOTUS, CPP, and multiple oil and gas rules, just to name a few.

Thank you Jim. Let's connect later this afternoon.

John

**From:** Jim Lakely [mailto:JLakely@heartland.org]  
**Sent:** Monday, June 12, 2017 10:54 AM  
**To:** Konkus, John <konkus.john@epa.gov>  
**Subject:** RE: United States Resets Climate Change Discussion At G7 - Preview

Sure. Looking forward to the call.

Do you think you and others at EPA would join us for our strategy meeting in DC on Tuesday and Wednesday? We had planned a program to help with messaging and communications leading up to the meeting Grifo canceled. We're still going on with the meeting.

It will be at the Capitol Skyline Hotel in SW, just a couple blocks north of Nationals Park. Here's the schedule:

Tuesday, June 13 – MC: Jim Lakely		
Time	Speaker	Presentation
2:00 p.m.	Tactics: Steve Milloy	Opening Remarks: What Needs to Be Done I
2:45 p.m.	Science: Jay Lehr	How to Summarize the Scientific Debate in 30 minutes or Less
3:30 p.m.	Speaker Training: Veronica Harrison	Tips for Effective Public Speaking
4:15 p.m.	Law: David Schnare	Inside and Outside EPA: How to Reform the Beast
5:00 p.m.	Wrap-up: Joe Bast	Closing remarks and adjourn
Wednesday, June 14 – MC: Jim Lakely		
9:00 a.m.	Tactics: Myron Ebell	Opening Remarks: What Needs to be Done II
9:45 a.m.	Science: Pat Michaels	Where the Science Debate Stands Right Now

10:30 a.m.	Economics: Kevin Dayaratna	Demolishing the Social Cost of Carbon Argument
11:15 a.m.	Energy Policy: Roger Bezdek	The Case for Fossil Fuels
12:00 p.m.	Speaker Training: Beverly Hallberg, District Media Group	Effective Public Speaking Strategies
1:00 p.m.	Wrap-up: Joe Bast	Closing remarks

Jim Lakely  
 Director of Communications  
 The Heartland Institute  
 3939 North Wilke Drive  
 Arlington Heights, IL 60004

O: Ex. 6 Personal Privacy (PP)  
 C:

Twitter: @HeartlandInst

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**From:** Konkus, John [<mailto:konkus.john@epa.gov>]  
**Sent:** Monday, June 12, 2017 9:44 AM  
**To:** Jim Lakely  
**Subject:** United States Resets Climate Change Discussion At G7 - Preview

Jim: I'll call you on this below. Looking for some echo help here...



U.S. ENVIRONMENTAL PROTECTION AGENCY  
**NEWS RELEASE**  
[WWW.EPA.GOV/NEWSROOM](http://WWW.EPA.GOV/NEWSROOM)

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## United States Resets Climate Change Discussion At G7

### *U.S. Formally Joins Communiqué, Reaching Consensus On Important Environmental Issues*

June 12, 2017

**Bologna, Italy** - Today, U.S. Environmental Protection Agency Administrator Scott Pruitt announced that the United States stands firm on its decision to withdraw from the Paris Agreement and has reset the conversation about climate change reflective of the new priorities of the Trump Administration and the expectations of the American people.

**“Respective of the importance to engage with longstanding allies and key international partners, we approached the climate discussions head on from a position of strength and clarity. We are resetting the dialogue to say Paris is not the only way forward to making progress. Today's action of reaching consensus makes clear that the Paris Agreement is not the only mechanism by which environmental stewardship can be demonstrated. It also demonstrates our commitment to honest conversations, which are the cornerstone of constructive international dialogue, ”** said Administrator Scott Pruitt.

While a party to the communiqué, the United States did not join the climate change sections, explicitly stating:

We the United States of America continue to demonstrate through action, having reduced our CO2 footprint as demonstrated by achieving pre-1994 CO2 levels domestically. The United States will continue to engage with key international partners in a manner that is consistent with our domestic priorities, preserving both a strong economy and a healthy environment. Accordingly, we the United States do not join those sections of the communiqué on climate and MDBs, reflecting our recent announcement to withdraw and immediately cease implementation of the Paris Agreement and associated financial commitment.

The United States and its G7 counterparts found common ground engaging in robust and constructive dialogue regarding other, equally important environmental issues. The United States joined consensus throughout the communiqué including the sections discussing resource efficiency, marine litter, and environmental policies and jobs.

**“The United States will continue to show leadership by offering action-oriented solutions to the world's environmental challenges. We have indicated a willingness to engage on an international stage that stands to greatly benefit from American ingenuity, innovation, and advanced technologies. We have already demonstrated significant progress towards mitigating environmental problems and we will continue to develop these for the benefit of all nations,”** Administrator Pruitt said.

BACKGROUND ...

G7 Bologna Environment Ministers' Meeting's Press Release

“We, the G7 Environment Ministers and high representatives, and European Commissioners responsible for environment and climate, met in Bologna on 11-12 June 2017. We were joined by heads and senior officials of International Organizations and by representatives of universities and firms.” (G7 Bologna Environment Ministers’ Meeting, [Press Release](#), 06/12/17)



<image001.png>



U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue Northwest  
Washington, D.C. 20004

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Message

---

**From:** Jim Lakely [JLakely@heartland.org]  
**Sent:** 6/13/2017 1:33:34 PM  
**To:** Konkus, John [konkus.john@epa.gov]  
**Subject:** Re: United States Resets Climate Change Discussion At G7 - Preview

Thanks, John. We got in just before 6 p.m. last night ... early enough that I was able to catch the Nats game last night. A wonderful park, and a crazy game.

Is it OK if I relate the information in this email in my opening remarks to the group this afternoon? I'll only say it comes from a "friend" or "source" in EPA.

Might we see others from EPA today or tomorrow?

Best,

Jim Lakely  
Director of Communications  
The Heartland Institute  
3939 North Wilke Road  
Arlington Heights, IL 60004

O:  
f: Ex. 6 Personal Privacy (PP)  
C:

Twitter: @HeartlandInst

---

**From:** "Konkus, John" <konkus.john@epa.gov>  
**Date:** Tuesday, June 13, 2017 at 7:54 AM  
**To:** Jim Lakely <JLakely@heartland.org>  
**Subject:** RE: United States Resets Climate Change Discussion At G7 - Preview

Jim: I hope your travel to Washington was uneventful. I will be covering a Senate Hearing for a POTUS nominee today so will regretfully be unable to attend today's session. However, I wanted to share a few points that I hope, in part, guide today's conversations:

\*The Science Integrity meeting this week was postponed by EPA because of Dr. Gifo's illness. We certainly all wish her health and a speedy recovery. In the meantime, this pause provides all involved the opportunity to coordinate further to ensure the rescheduled meeting is productive and constructive. More industry, more conservative and a broader group of voices will be involved.

My understanding is that Dr. Grifo's illness is serious enough to cause this postponement, so we should all to be respectful of that.

\*Despite the intensity of the attacks from the left, EPA is managing massive changes and reforms. Barbs from the right hurt and hinder this progress. We need MORE support for our efforts. That will lead to much better working partnerships.

\*Our movement and our cause as defined by the Trump Presidency are helped by this group when it recognizes and echoes our achievements including:

- >Getting beyond Paris.
- >Restructuring the EPA around a back to basics agenda.
- >Delivering a budget that would have been unthinkable under any other leadership.

>Moving over 25 significant OMB actions which is an amazing feat in this short amount of time, including: WOTUS, CPP, and multiple oil and gas rules, just to name a few.

Thank you Jim. Let's connect later this afternoon.

John

**From:** Jim Lakely [mailto:JLakely@heartland.org]  
**Sent:** Monday, June 12, 2017 10:54 AM  
**To:** Konkus, John <konkus.john@epa.gov>  
**Subject:** RE: United States Resets Climate Change Discussion At G7 - Preview

Sure. Looking forward to the call.

Do you think you and others at EPA would join us for our strategy meeting in DC on Tuesday and Wednesday? We had planned a program to help with messaging and communications leading up to the meeting Grifo canceled. We're still going on with the meeting.

It will be at the Capitol Skyline Hotel in SW, just a couple blocks north of Nationals Park. Here's the schedule:

Tuesday, June 13 – MC: Jim Lakely		
Time	Speaker	Presentation
2:00 p.m.	Tactics: Steve Milloy	Opening Remarks: What Needs to Be Done I
2:45 p.m.	Science: Jay Lehr	How to Summarize the Scientific Debate in 30 minutes or Less
3:30 p.m.	Speaker Training: Veronica Harrison	Tips for Effective Public Speaking
4:15 p.m.	Law: David Schnare	Inside and Outside EPA: How to Reform the Beast
5:00 p.m.	Wrap-up: Joe Bast	Closing remarks and adjourn
Wednesday, June 14 – MC: Jim Lakely		
9:00 a.m.	Tactics: Myron Ebell	Opening Remarks: What Needs to be Done II
9:45 a.m.	Science: Pat Michaels	Where the Science Debate Stands Right Now
10:30 a.m.	Economics: Kevin Dayaratna	Demolishing the Social Cost of Carbon Argument
11:15 a.m.	Energy Policy: Roger Bezdek	The Case for Fossil Fuels
12:00 p.m.	Speaker Training: Beverly Hallberg, District Media Group	Effective Public Speaking Strategies
1:00 p.m.	Wrap-up: Joe Bast	Closing remarks

Jim Lakely  
Director of Communications  
The Heartland Institute  
3939 North Wilke Drive

Arlington Heights, IL 60004

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C:

Twitter: @HeartlandInst

---

**From:** Konkus, John [<mailto:konkus.john@epa.gov>]

**Sent:** Monday, June 12, 2017 9:44 AM

**To:** Jim Lakely

**Subject:** United States Resets Climate Change Discussion At G7 - Preview

Jim: I'll call you on this below. Looking for some echo help here...



U.S. ENVIRONMENTAL PROTECTION AGENCY  
**NEWS RELEASE**  
WWW.EPA.GOV/NEWSROOM

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## **United States Resets Climate Change Discussion At G7**

### *U.S. Formally Joins Communiqué, Reaching Consensus On Important Environmental Issues*

**June 12, 2017**

**Bologna, Italy** - Today, U.S. Environmental Protection Agency Administrator Scott Pruitt announced that the United States stands firm on its decision to withdraw from the Paris Agreement and has reset the conversation about climate change reflective of the new priorities of the Trump Administration and the expectations of the American people.

**"Respective of the importance to engage with longstanding allies and key international partners, we approached the climate discussions head on from a position of strength and clarity. We are resetting the dialogue to say Paris is not the only way forward to making progress. Today's action of reaching consensus makes clear that the Paris Agreement is not the only mechanism by which environmental stewardship can be demonstrated. It also demonstrates our commitment to honest conversations, which are the cornerstone of constructive international dialogue, "** said Administrator Scott Pruitt.

While a party to the communiqué, the United States did not join the climate change sections, explicitly stating:



We the United States of America continue to demonstrate through action, having reduced our CO2 footprint as demonstrated by achieving pre-1994 CO2 levels domestically. The United States will continue to engage with key international partners in a manner that is consistent with our domestic priorities, preserving both a strong economy and a healthy environment. Accordingly, we the United States do not join those sections of the communiqué on climate and MDBs, reflecting our recent announcement to withdraw and immediately cease implementation of the Paris Agreement and associated financial commitment.

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**“The United States will continue to show leadership by offering action-oriented solutions to the world’s environmental challenges. We have indicated a willingness to engage on an international stage that stands to greatly benefit from American ingenuity, innovation, and advanced technologies. We have already demonstrated significant progress towards mitigating environmental problems and we will continue to develop these for the benefit of all nations,”** Administrator Pruitt said.

#### BACKGROUND ...

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“We, the G7 Environment Ministers and high representatives, and European Commissioners responsible for environment and climate, met in Bologna on 11-12 June 2017. We were joined by heads and senior officials of International Organizations and by representatives of universities and firms.” (G7 Bologna Environment Ministers’ Meeting, Press Release, 06/12/17)



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Message

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**From:** Jackson, Ryan [jackson.ryan@epa.gov]  
**Sent:** 6/12/2017 3:22:05 PM  
**To:** Konkus, John [konkus.john@epa.gov]; Bowman, Liz [Bowman.Liz@epa.gov]  
**Subject:** RE: This week

## Ex. 5 Deliberative Process (DP)

**From:** Konkus, John  
**Sent:** Monday, June 12, 2017 11:18 AM  
**To:** Jackson, Ryan <jackson.ryan@epa.gov>; Bowman, Liz <Bowman.Liz@epa.gov>  
**Subject:** RE: This week

## Ex. 5 Deliberative Process (DP)

**From:** Jackson, Ryan  
**Sent:** Monday, June 12, 2017 11:17 AM  
**To:** Konkus, John <konkus.john@epa.gov>; Bowman, Liz <Bowman.Liz@epa.gov>  
**Subject:** RE: This week

## Ex. 5 Deliberative Process (DP)

**From:** Konkus, John  
**Sent:** Monday, June 12, 2017 11:10 AM  
**To:** Jackson, Ryan <jackson.ryan@epa.gov>; Bowman, Liz <Bowman.Liz@epa.gov>  
**Subject:** RE: This week

## Ex. 5 Deliberative Process (DP)

**From:** Jackson, Ryan  
**Sent:** Monday, June 12, 2017 11:09 AM  
**To:** Konkus, John <konkus.john@epa.gov>; Bowman, Liz <Bowman.Liz@epa.gov>  
**Subject:** RE: This week

## Ex. 5 Deliberative Process (DP)

**From:** Konkus, John  
**Sent:** Monday, June 12, 2017 11:06 AM  
**To:** Jackson, Ryan <jackson.ryan@epa.gov>; Bowman, Liz <Bowman.Liz@epa.gov>  
**Subject:** This week

## Ex. 5 Deliberative Process (DP)

## Ex. 5 Deliberative Process (DP)

**From:** Jim Lakely [mailto:JLakely@heartland.org]

**Sent:** Monday, June 12, 2017 10:54 AM

**To:** Konkus, John <konkus.john@epa.gov>

**Subject:** RE: United States Resets Climate Change Discussion At G7 - Preview

Do you think you and others at EPA would join us for our strategy meeting in DC on Tuesday and Wednesday? We had planned a program to help with messaging and communications leading up to the meeting Grifo canceled. We're still going on with the meeting.

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12:00 p.m.	Speaker Training: Beverly Hallberg, District Media Group	Effective Public Speaking Strategies
1:00 p.m.	Wrap-up: Joe Bast	Closing remarks

Jim Lakely  
Director of Communications  
The Heartland Institute  
3939 North Wilke Drive  
Arlington Heights, IL 60004

O: 

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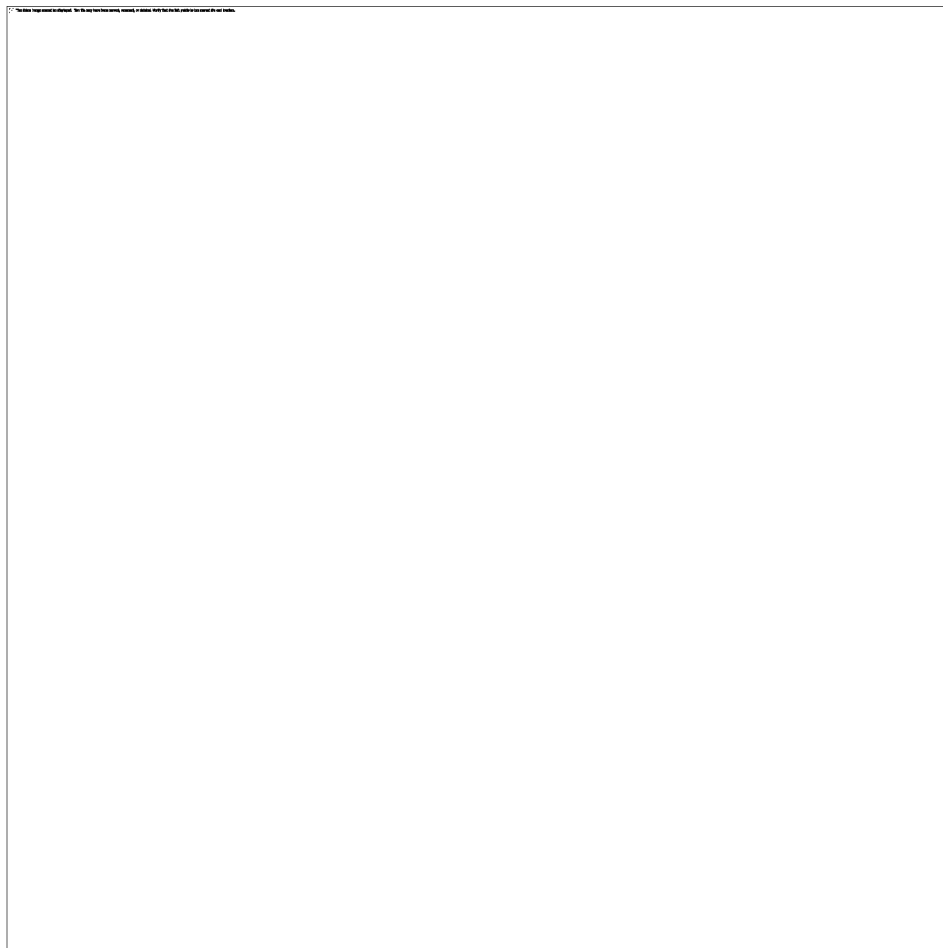
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**From:** Dewey, Amy [Dewey.Amy@epa.gov]  
**Sent:** 6/1/2017 8:46:38 PM  
**To:** Konkus, John [konkus.john@epa.gov]  
**CC:** Milbourn, Cathy [Milbourn.Cathy@epa.gov]  
**Subject:** FW: Statement from E&E Legal's Steve Milloy re: President Trump's Paris Treaty Announcement

OK some more positive statements!

---

**Subject:** Statement from E&E Legal's Steve Milloy re: President Trump's Paris Treaty Announcement



**For Immediate Release:**  
June 1, 2017

**Contact:**

---

Craig Richardson  
[info@eelegal.org](mailto:info@eelegal.org)  
202-810-2001

**E&E Legal Senior Policy Fellow Steve Milloy's Statement Regarding  
President Trump's Decision to Withdraw the U.S. from the Paris  
Climate Treaty**

“The Energy & Environment Legal Institute (E&E Legal) applauds President Trump’s decision to abandoned the disastrous Paris Treaty that would have destroyed American jobs and led to skyrocketing energy prices putting those most vulnerable at risk. Europe is the model for these failed ‘climate policies,’ and President Trump is correct in not allowing the United States to go down the same path. We look forward to working with the President as he implements his America first energy policies, and we will do whatever we can to combat the unprecedented hysteria spewing from global elitists bent on destroying our great nation.”

-30-

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E&E Legal periodically disseminates press releases, reports, and other important information to those who signed-up or to those we believe would be interested in receiving.

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Message

---

**From:** Sinks, Tom [Sinks.Tom@epa.gov]  
**Sent:** 6/7/2017 6:51:24 PM  
**To:** Konkus, John [konkus.john@epa.gov]  
**Subject:** RE: Invitations to EPA meeting

On my way

---

**From:** Konkus, John  
**Sent:** Wednesday, June 07, 2017 2:50 PM  
**To:** Sinks, Tom <Sinks.Tom@epa.gov>  
**Subject:** RE: Invitations to EPA meeting

3407

---

**From:** Sinks, Tom  
**Sent:** Wednesday, June 7, 2017 2:49 PM  
**To:** Konkus, John <[konkus.john@epa.gov](mailto:konkus.john@epa.gov)>  
**Subject:** RE: Invitations to EPA meeting

Where are you?

---

**From:** Konkus, John  
**Sent:** Wednesday, June 07, 2017 2:49 PM  
**To:** Sinks, Tom <[Sinks.Tom@epa.gov](mailto:Sinks.Tom@epa.gov)>  
**Subject:** RE: Invitations to EPA meeting

Sure.

---

**From:** Sinks, Tom  
**Sent:** Wednesday, June 7, 2017 2:46 PM  
**To:** Konkus, John <[konkus.john@epa.gov](mailto:konkus.john@epa.gov)>  
**Subject:** RE: Invitations to EPA meeting

How about I walk over and we talk?

---

**From:** Konkus, John  
**Sent:** Wednesday, June 07, 2017 1:45 PM  
**To:** Sinks, Tom <[Sinks.Tom@epa.gov](mailto:Sinks.Tom@epa.gov)>  
**Subject:** FW: Invitations to EPA meeting

Tom what is your recommendation? Thank you.

---

**From:** Joseph Bast [<mailto:JBast@heartland.org>]  
**Sent:** Wednesday, June 7, 2017 1:26 PM  
**To:** Konkus, John <[konkus.john@epa.gov](mailto:konkus.john@epa.gov)>  
**Cc:** Jim Lakely <[JLakely@heartland.org](mailto:JLakely@heartland.org)>  
**Subject:** Invitations to EPA meeting

John,

I contacted many of the people we work with on the climate issue as well as my own staff to see if they could attend EPA's Scientific Integrity annual meeting next week. To my surprise, **forty of them said they will attend if allowed**. All are highly qualified, many have affiliations that I believe would qualify them as "stakeholders" independent of any affiliation with The Heartland Institute.

The list, with their affiliations and email addresses, appears below and is attached in PDF.

Can you get invitations for all of them?

Can you get invitations for some of them?

Or should I forward to them the invitation I received, and let them RSVP to the SIO?

Or should I contact SIO with this list in hand and say these are my guests?

Call me at [Ex. 6 Personal Privacy (PP)] so we can discuss this.

Joe

Joseph Bast  
President  
The Heartland Institute  
3939 N. Wilke Road  
Arlington Heights, IL 60004  
Phone: [Ex. 6 Personal Privacy (PP)]  
Email [jbast@heartland.org](mailto:jbast@heartland.org)  
Web site <http://www.heartland.org>

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1, Charles Anderson, Ph.D., Anderson Materials Evaluation, Inc., [charles.anderson@andersonmaterials.com](mailto:charles.anderson@andersonmaterials.com),

[Ex. 6 Personal Privacy (PP)]

2, Joseph Bast, The Heartland Institute, [jbast@heartland.org](mailto:jbast@heartland.org), [Ex. 6 Personal Privacy (PP)]

3, Richard Belzer, Ph.D., Regulatory Checkbook, [rbbelzer@post.harvard.edu](mailto:rbbelzer@post.harvard.edu), [Ex. 6 Personal Privacy (PP)]

4, Tim Benson, , The Heartland Institute, [tbenson@heartland.org](mailto:tbenson@heartland.org), [Ex. 6 Personal Privacy (PP)]

5, Edwin X. Berry, Ph.D., Climate Physics LLC, [ed@edberry.com](mailto:ed@edberry.com), [Ex. 6 Personal Privacy (PP)]

6, Joe Bevelacqua, Ph.D., Bevelacqua Resources, [Ex. 6 Personal Privacy (PP)]

7, Roger Bezdek, Ph.D., Management Information Services, Inc., [rbezdek@misi-net.com](mailto:rbezdek@misi-net.com), [Ex. 6 Personal Privacy (PP)]

8, Daniel Botkin, Ph.D., Center for the Study of the Environment, [danielbotkin@att.net](mailto:danielbotkin@att.net),

9, Sterling Burnett, Ph.D., The Heartland Institute, [hsburnett@heartland.org](mailto:hsburnett@heartland.org), [Ex. 6 Personal Privacy (PP)]

10, William Briggs, Ph.D., Author, statistician, and former professor, [matt@wmbriggs.com](mailto:matt@wmbriggs.com),

11, Jeremy Carl, Ph.D., Hoover Institution, [carljc@stanford.edu](mailto:carljc@stanford.edu),

12, Alan Carlin, Ph.D., Competitive Enterprise Institute, [Ex. 6 Personal Privacy (PP)]

13, Kevin Dayaratna, Ph.D., Heritage Foundation, [kevin.Dayaratna@heritage.org](mailto:kevin.Dayaratna@heritage.org), [Ex. 6 Personal Privacy (PP)]

14, Hal Dorion, Ph.D., The Right Climate Stuff, [Ex. 6 Personal Privacy (PP)]

15, Paul Driessen, JD, CFACT, [Ex. 6 Personal Privacy (PP)]

16, Myron Ebell, Competitive Enterprise Institute, [mebell@cei.org](mailto:mebell@cei.org),

17, Gordon Fulks, Ph.D., The Heartland Institute, [Ex. 6 Personal Privacy (PP)]



- 18, Larry Gould, Ph.D., University of Hartford, [lgould@hartford.edu](mailto:lgould@hartford.edu),
- 19, Kenneth Haapala, , Science and Environmental Policy Project, [ken@haapala.com](mailto:ken@haapala.com) ,
- 20, Veronica Harrison, The Heartland Institute, [vharrison@heartland.org](mailto:vharrison@heartland.org), Ex. 6 Personal Privacy (PP)
- 21, Howard Hayden, Ph.D., University of Connecticut (emeritus), Ex. 6 Personal Privacy (PP)
- 22, Tony Heller, RealScience.org, Ex. 6 Personal Privacy (PP)
- 23, Edward Hudgins, Ph.D., The Heartland Institute, [ehudgins@heartland.org](mailto:ehudgins@heartland.org), Ex. 6 Personal Privacy (PP)
- 24, Jim Lakely, The Heartland Institute, [jlakely@heartland.org](mailto:jlakely@heartland.org), Ex. 6 Personal Privacy (PP)
- 25, Jay Lehr, Ph.D., The Heartland Institute, Ex. 6 Personal Privacy (PP)
- 26, Marlo Lewis, Competitive Enterprise Institute, [mlewis@cei.org](mailto:mlewis@cei.org),
- 27, Tony Lupo, Ph.D., University of Missouri, [LupoA@missouri.edu](mailto:LupoA@missouri.edu),
- 28, Ross McKittrick, Ph.D., University of Guelph, [rmckitri@uoguelph.ca](mailto:rmckitri@uoguelph.ca), Ex. 6 Personal Privacy (PP)
- 29, Ference Miskolczi, Ph.D., Former NASA senior principal scientist, Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP)
- 30, Patrick Michaels, Ph.D., Cato Institute, [pmichaels@cato.org](mailto:pmichaels@cato.org),
- 31, Steve Milloy, junkscience.org, Ex. 6 Personal Privacy (PP)
- 32, Norm Rogers, The Heartland Institute, Ex. 6 Personal Privacy (PP)
- 33, David Schnare, Ph.D., Energy and Environment Legal Institute , Ex. 6 Personal Privacy (PP)
- 34, Dave Stevenson, Ceasar Rodney Institute, Ex. 6 Personal Privacy (PP)
- 35, Leighton Steward, PlantsNeedCO2.org, Ex. 6 Personal Privacy (PP)
- 36, Aaron Stover, The Heartland Institute, [astover@heartland.org](mailto:astover@heartland.org), Ex. 6 Personal Privacy (PP)
- 37, Ronald Sundelin, Ph.D., Virginia Tech, Ex. 6 Personal Privacy (PP)
- 38, Dan Sutter, Ph.D., Troy University, [dsutter@troy.edu](mailto:dsutter@troy.edu) , Ex. 6 Personal Privacy (PP)
- 39, James Taylor, JD, Spark of Freedom Foundation, Ex. 6 Personal Privacy (PP)
- 40, Katie Tubb, Heritage Foundation, [katie.tubb@heritage.org](mailto:katie.tubb@heritage.org),
- 41, James Wanliss, Ph.D., Presbyterian College, Ex. 6 Personal Privacy (PP)
- 42, Robert Zybach, Ph.D., NW Maps Co., [ZybachB@NWMapsCo.com](mailto:ZybachB@NWMapsCo.com), Ex. 6 Personal Privacy (PP)

Message

---

**From:** Steve Milloy [Ex. 6 Personal Privacy (PP)]  
**Sent:** 8/19/2017 9:06:25 PM  
**To:** Press [Press@epa.gov]  
**CC:** Brittany Bolen [Ex. 6 Personal Privacy (PP)] Mandy Gunasekara [Ex. 6 Personal Privacy (PP)] Richard Yamada  
[Ex. 6 Personal Privacy (PP)]  
**Subject:** Re: The New York Times & Chlorpyrifos

You need to post this on your web site.

Steve Milloy

On Aug 19, 2017, at 3:52 PM, EPA Press Office <press@epa.gov> wrote:



U.S. ENVIRONMENTAL PROTECTION AGENCY  
**NEWS RELEASE**  
WWW.EPA.GOV/NEWSROOM

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Good Morning -

After a monumental mistake where the New York Times was caught peddling false information, they're at it again.

Last night, the New York Times' Eric Lipton and Roni Rabin reported on false facts about the EPA's decision not to ban the pesticide Chlorpyrifos and the decision to continue the review regarding the pesticide.

Specifically speaking, they left out that the EPA's decision was upheld by the 9th Circuit Court of Appeals in San Francisco.

They also took the drastic decision of omitting words from the EPA's one-sentence statement in response to their story that reminded Americans that the USDA had scientific concerns about banning this pesticide. Additionally, three days before President Trump's inauguration, the Obama Administration's USDA strongly opposed banning this pesticide.

Given that the New York Times never lets the truth get in the way of a good story, below is our official statement that was provided to them, along with some inconvenient facts that their story left out.

"Taking emails out of context doesn't change the fact that we continue to examine the science surrounding chlorpyrifos, while taking into account USDA's scientific concerns with methodology used by the previous administration." - EPA spokesman, Amy Graham

BACKGROUND ...

**Despite having 8 years to review the petition on chlorpyrifos, the Obama Administration never banned Chlorpyrifos.** "The EPA considered whether to ban it for roughly a decade before Trump appointed EPA Administrator Scott Pruitt, a Republican from Oklahoma, to lead the agency." (Reuters, 07/25/17)

**The EPA is still reviewing Chlorpyrifos.** "The agency said it was still reviewing the chemical's registration." (Reuters, 07/25/17)

**San Francisco-based 9th Circuit Court of Appeals rejects greens' appeal of EPA decision not to ban pesticide.** "A federal appeals court rejected a request from environmental groups to overturn the Environmental Protection Agency's (EPA) decision not to restrict the controversial pesticide chlorpyrifos." (The Hill, 07/18/17)

**The U.S. Department of Agriculture supported the EPA's action.** "'This is a welcome decision grounded in evidence and science,' said Sheryl Kunickis, director of the Office of Pest Management Policy at USDA. 'It means that this important pest management tool will remain available to growers, helping to ensure an abundant and affordable food supply for this nation and the world. This frees American farmers from significant trade disruptions that could have been caused by an unnecessary, unilateral revocation of chlorpyrifos tolerances in the United States. It is also great news for consumers, who will continue to have access to a full range of both domestic and imported fruits and vegetables. We thank our colleagues at EPA for their hard work.'" (Food Safety News, 03/31/17)

**National Association of State Departments of Agriculture also objected to Obama's EPA methodology.** "Similarly, the National Association of State Departments of Agriculture also objected to EPA's methodology. The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Scientific Advisory Panel (SAP) also expressed concerns with regard to EPA's previous reliance on certain data the agency had used to support its proposal to ban the pesticide." (Food Safety News, 03/31/17)

**The Washington Post: New York Times guilty of large screw-up on climate-change story.** "The New York Times on Wednesday appended a correction to a story about a climate change study: Correction: August 9, 2017 -- An article on Tuesday about a sweeping federal climate change report referred incorrectly to the availability of the report. While it was not widely publicized, the report was uploaded by the nonprofit Internet Archive in January; it was not first made public by The New York Times. That correction, which sits at the foot of the story, dutifully straightens out the record. Yet given the magnitude of the screw-up, it should sit atop the story, surrounded by red flashing lights and perhaps an audio track to instruct readers: Warning: This story once peddled a faulty and damaging premise." (The Washington Post, 08/09/17)

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**From:** Myron Ebell [Myron.Ebell@cei.org]  
**Sent:** 10/17/2018 4:17:33 PM  
**To:** Myron Ebell [Myron.Ebell@cei.org]  
**Subject:** FW: Report - Tailpipe Emissions Are SAFE: Trump Fuel Economy Reform Will Not Cause Air Pollution Deaths

This morning, CEI released a new report titled "[Will the Trump Fuel Economy Reform Proposal Create Deadly Air Pollution?](#)" Authored by [Steve Milloy](#), the founder and publisher of JunkScience.com and a former CEI adjunct scholar, the paper debunks false claims that the Trump administration plan to scale back government fuel efficiency mandates poses an offsetting risk of deaths from increased tailpipe emissions.

Opponents of the administration's Safe Affordable Fuel Efficient (SAFE) Vehicles Rule claim the proposal's lives-saved claim should be offset by deaths resulting from increased emissions of air pollutants associated with the rollback of mileage standards. The CEI report shows that available scientific and real-world evidence fail to link soot and dust in outdoor air (known as particulate matter) with death. Thus, the benefit-cost analysis for the SAFE rule—or any other Environmental Protection Agency rule—should not consider those unjustified claims.

Link to paper: [Will the Trump Fuel Economy Reform Proposal Create Deadly Air Pollution?](#)

Link to press release: [Report - Tailpipe Emissions Are SAFE: Trump Fuel Economy Reform Will Not Cause Air Pollution Deaths](#)

Link to CEI tweet: <https://twitter.com/ceidotorg/status/1052529772377595904>

Link to CEI Facebook post:

<https://www.facebook.com/CompetitiveEnterpriseInstitute/posts/10156772838569036>

### **Daily Caller: Study Supports Trump's Claims that Vehicle Regulation Rollback will Save Lives**

By Jason Hopkins

<https://dailycaller.com/2018/10/17/cei-report-vehicle-standards-rollback/>

A new report reportedly debunks claims that the Trump administration is placing more people at risk of death with its plan to freeze the corporate average fuel economy (CAFE) standards.

The National Highway Traffic Safety Administration and the Environmental Protection Agency announced a plan in August to roll back vehicle emission standards established during the Obama era. The Trump administration argues that this regulation overhaul will give relief to consumers and save lives by reducing traffic fatalities. The rollback — referred to as the Safe Affordable Fuel Efficient (SAFE) Vehicles Rule — is expected to prevent 1,000 traffic fatalities per year.

...

In a response to these claims, the Competitive Enterprise Institute (CEI) released a report Wednesday that breaks down why this claim is incorrect. Namely, CEI finds that there is no real evidence to suggest that particulate matter (PM), dust and soot in outside air, causes death.

Their study, authored by Steve Milloy, focused on the science behind PM, which can come from both natural and man-made sources. Natural sources include instances such as forest fires and volcanic eruptions. Examples of man-made sources include smoking, smokestacks and tailpipes.

CEI lists studies, with evidence available for the public, that document humans developing no harm from inhaling PM, despite "secret science" studies in the past that have suggested otherwise.

“It is clear that the available evidence fails to link PM2.5 in outdoor air with death. Therefore, a benefit-cost analysis for the SAFE rule need not concern itself with PM2.5 and death,” the CEI report concluded. “Whatever minor changes in PM2.5 levels that might be brought about by the proposed SAFE rule — PM2.5 levels could slightly increase or even decrease because of the rule — will not cause or prevent deaths or change death rates.”

**From:** Dewey, Amy [Dewey.Amy@epa.gov]  
**Sent:** 7/30/2018 3:39:32 PM  
**To:** Konkus, John [konkus.john@epa.gov]  
**Subject:** FW: 12 DAYS AWAY: Why Is America #Winning 🇺🇸 on Energy?



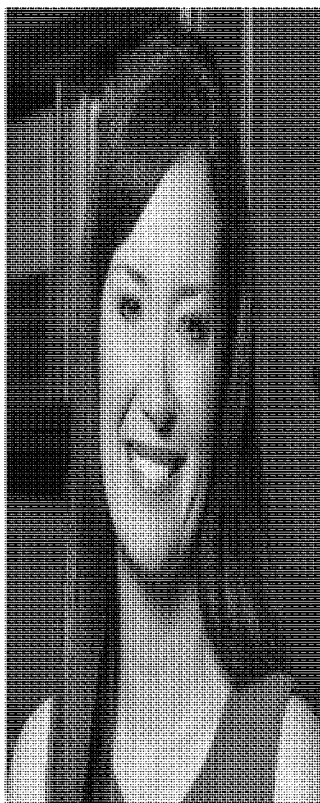
## ***AMERICA IS #WINNING ON ENERGY***

*Learn why at this special one-day event on Aug. 7*

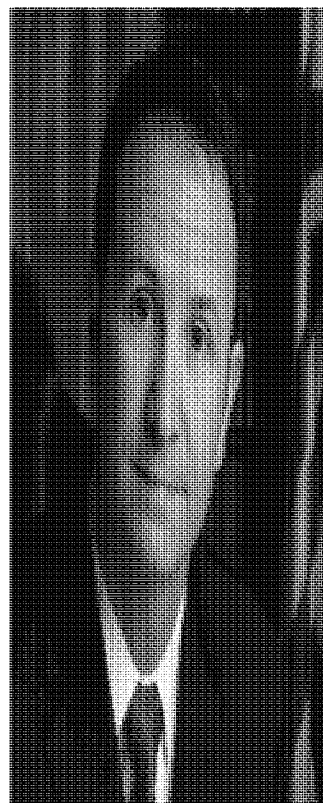
***Confirmed Keynotes***



**Joe Balash**  
Assistant Secretary  
Department of the Interior



**Brooke Rollins**  
White House Office  
of American Innovation



**Jeff Landry**  
Attorney General  
State of Louisiana

The Heartland Institute is hosting the [America First Energy Conference 2018](#) on August 7 at the Hilton New Orleans Riverside hotel. The event will outline the advances for **Energy Freedom** we've seen come about under President Trump, and look forward to the advances we'll see in the years to come.

**We have a VIP-laden program in store, and the event is only 12 days away, so register today!**

**Tuesday, August 7, 2018**  
ALL DAY — 10 panels  
and five VIP keynotes

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Louisiana 70130

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**Registration: \$129.00**  
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Watch Heartland's AFEC 2018 promo video



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## ABOUT THE CONFERENCE

The [Heartland Institute](#) picked New Orleans as the host city of the [America First Energy Conference](#) (#AFEC2018) because it is the hub of America's energy and refinery industry. The conference will feature approximately 30 speakers from government, industry, academia, and other think tanks speaking on 10 panels and three plenary sessions.

We expect between 300 and 400 people to attend (**INCLUDING YOU!**), and also in the audience will be state legislators, congressional staff, state think tank leaders, private sector government relations professionals, and policy analysts.

President Donald Trump's bold [America First Energy Plan](#) marks a decisive change in direction from the Obama administration's "war on fossil fuels," the industry that keeps Louisiana's economy vibrant. You will learn so much from our program.

## Celebrating Energy Victories, Reaching for More



Tim Huelskamp, Ph.D.  
Heartland President/CEO

One and a half years after his inauguration, the Trump administration has already accomplished much of its ambitious agenda.

President Trump's Environmental Protection Agency has pulled the U.S. out of the energy-killing Paris Climate Accord, canceled Obama's Clean Power Plan, and ended the use of "secret science" to set economy-killing regulations.

Trump's EPA has also **canceled Obama's last-minute CAFE standards** for automobiles — fuel-efficiency goals Obama set to placate the "everyone-ride-a-bike" green extremists. Those standards were not remotely attainable without HUGE increases in the cost of new vehicles. The upshot? New vehicles would also become dramatically less safe.

Trump's EPA also **canceled Obama's Clean Power Plan** and **rescinded the "social cost of carbon"** as a chief factor in regulatory decisions. At the same time, President Trump vastly **expanded energy exploration on U.S. lands and offshore** — a great boon to our economy and the life of every American.

But what else remains to be done?  
How permanent will these victories be?

What scientific and economic evidence is there that the Trump plan is putting America on the right path toward economic growth, environmental protection, or both?

We will explore those questions (and more) at the America First Energy Conference 2018 in New Orleans.

## **JOIN US!**

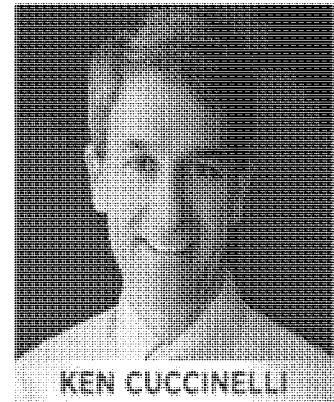
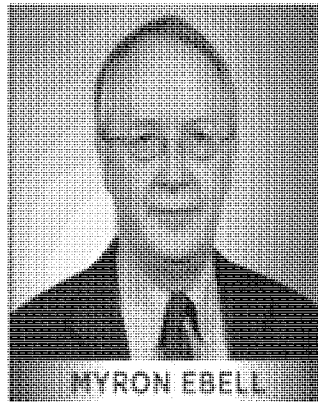
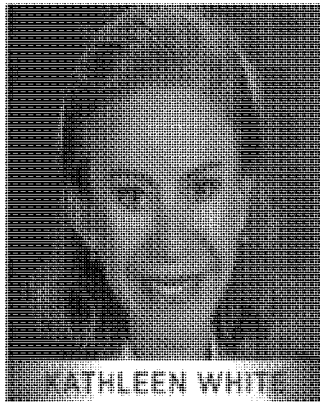
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### **AFEC 2018 Schedule**

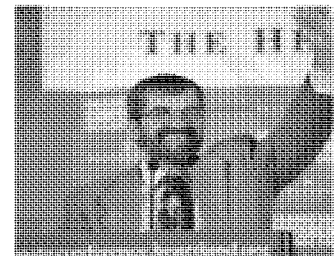
The #AFEC2018 schedule includes three plenary VIP keynotes sessions during breakfast, lunch, and dinner as well as the following panels:

- Why CO2 Emissions Are Not Creating a Climate Crisis
- CAFE Standards: Why They Need to Go
- REINing in the Regulators
- Fueling Freedom and Prosperity
- Fiduciary Malpractice: The 'Sustainable' Investment Movement
- Reforming EPA: Lots of Progress, More to Do
- The Future of Coal, Oil, and Natural Gas
- Carbon Taxes, Cap & Trade, and Other Bad Ideas
- Climate Lawsuits Against Energy Companies and the Government
- Battling Russia and America's Big Green Machine

### **Confirmed Speakers**

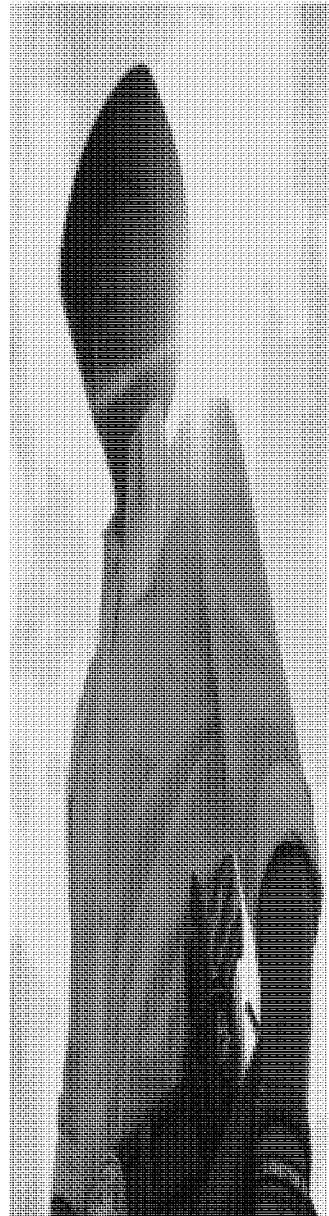


- **Joe Balash, Department of the Interior**
- Joseph Bast, The Heartland Institute
- Tim Benson, The Heartland Institute
- Paul Blair, Americans for Tax Reform
- H. Sterling Burnett, The Heartland Institute
- Bonner Cohen, CFACT
- Amy Oliver Cooke, Independence Institute\*

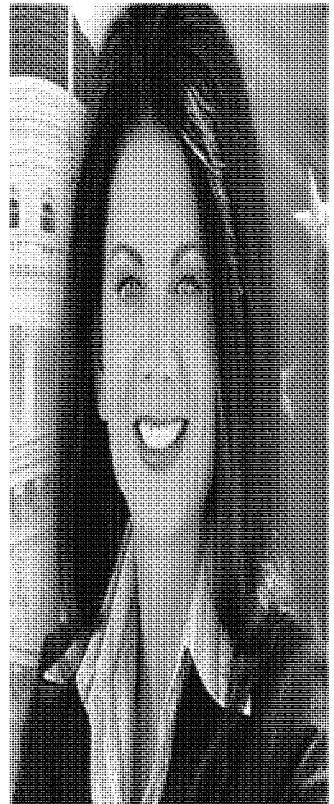


- Ken Cuccinelli, former VA Attorney General
- Myron Ebell, CEI\*
- Peter Ferrara, The Heartland Institute
- Jason Funes, Department of the Interior
- Tom Harris, ICSC
- U.S. Rep. Clay Higgins, (R-LA, 3rd District)
- Derrick Hollie, Reaching America
- **Tim Huelskamp, The Heartland Institute**
- Sam Kazman, CEI
- Todd Kendall, Compass Lexecon
- Grant Kidwell, ALEC
- Jim Lakely, The Heartland Institute
- **Jeff Landry, Louisiana Attorney General**
- David Legates, University of Delaware
- Jay Lehr, The Heartland Institute
- Joe Leimkuhler, Vice President, LLOG
- Nick Loris, Heritage Foundation
- Harry MacDougald, climate attorney
- Mark Mathis, Clear Energy Alliance
- Amanda Maxham, climate scientist
- Assemb. Melissa Melendez (R-California)
- Steve Milloy, Junkscience.com\*
- John Nothdurft, The Heartland Institute
- Fred Palmer, The Heartland Institute
- Rachelle Peterson, NAS
- Craig Richardson, E&E Legal Institute
- **Brooke Rollins, Advisor to President Trump**
- Craig Rucker, CFACT
- **Roy Spencer, U. of Alabama at Huntsville**
- Daniel Turner, Power the Future
- Greg Walcher, Former Sec., Colorado DNR
- Kathleen Hartnett White, TPPF\*
- Benjamin Zycher, AEI

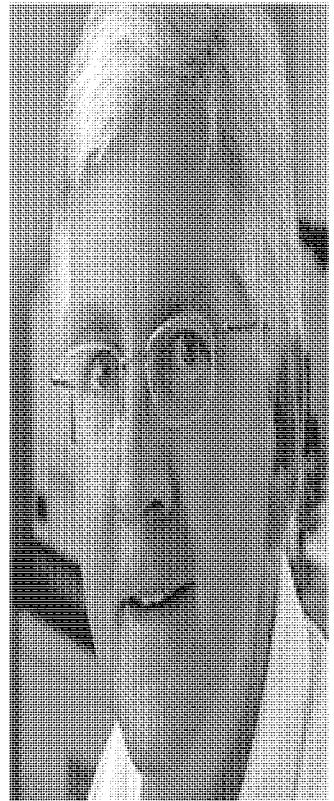
Joseph Bast, Senior Fellow  
The Heartland Institute



Rep. Clay Higgins,  
Republican of Louisiana



Assemb. Melissa Melendez  
Republican of California



Dr. Roy Spencer, Ph.D.  
University of AL, Huntsville

(\* Served on President Trump's transition team; **bold** are keynotes.)

Click [here](#) to see all the speaker bios.

Conservatives and libertarians who have worked so hard to develop the ideas and market-based solutions key to the president's plan have much to celebrate, can play a role in ensuring the victories continue, and must be certain they are not reversed in the future. We are already witnessing positive results from the energy freedom agenda. Now is the time to consolidate and expand these gains!

We hope you will join us for in New Orleans on August 7 for this important and informative event. **BUT TIME IS RUNNING OUT.** Go to [AmericaFirstEnergy.org](http://AmericaFirstEnergy.org) for more information and register today!

CLICK HERE TO REGISTER



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This message was sent to [bonnercohen@comcast.net](mailto:bonnercohen@comcast.net) from [bjones@heartland.org](mailto:bjones@heartland.org)

Honorable Tim Huelskamp, Ph.D.  
The Heartland Institute  
3939 North Wilke Road  
Arlington Heights, IL 60004

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Message

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**From:** Jim Lakely [JLakely@heartland.org]  
**Sent:** 4/24/2018 7:12:29 PM  
**To:** Konkus, John [konkus.john@epa.gov]  
**Subject:** RE: Heartland Institute Applauds End of 'Secret Science' at EPA

Thanks, John. I had it teed up to go right after the event with Administrator Pruitt today. Our guy in the room, Aaron Stover, took that picture for the release and got one with your boss, too.

Speaking of Mr. Pruitt, we would love to feature him as a keynote speaker at our America First Energy Conference 2018 in New Orleans on August 7. I can share with you my proposed schedule if you'd like a better idea of how our awesome schedule is coming together, and where Administrator Pruitt would be featured (closing dinner).

Best,

Jim Lakely  
Director of Communications  
The Heartland Institute  
3939 North Wilke Drive  
Arlington Heights, IL 60004

O: Ex. 6 Personal Privacy (PP)  
C:

Twitter: @HeartlandInst

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**From:** Konkus, John [mailto:konkus.john@epa.gov]  
**Sent:** Tuesday, April 24, 2018 1:43 PM  
**To:** Jim Lakely  
**Subject:** FW: Heartland Institute Applauds End of 'Secret Science' at EPA

Great stuff!

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**From:** Joseph Bast [mailto:JBast@heartland.org]  
**Sent:** Tuesday, April 24, 2018 2:40 PM  
**Subject:** Heartland Institute Applauds End of 'Secret Science' at EPA

---

**From:** Jim Lakely <jlakely@heartland.org> on behalf of Jim Lakely <jlakely@heartland.org>  
**Date:** Tuesday, April 24, 2018 at 1:32 PM  
**To:** Jim Lakely <JLakely@heartland.org>  
**Subject:** Heartland Institute Applauds End of 'Secret Science' at EPA

**THE HEARTLAND INSTITUTE**  
FREEDOM RISING



# Heartland Institute Applauds End of ‘Secret Science’ at EPA



Environmental Protection Agency Administrator Scott Pruitt today announced the end of “secret science” at the agency. The new rule, subject to a 30-day comment period, will require the underlying data of scientific studies used to make federal environment and energy policy be open to public inspection and possible criticism.

The following statements from environment and energy experts at The Heartland Institute – a free-market think tank – may be used for attribution. (NOTE: Picture at left taken by Heartland Institute staffer who was invited to the announcement today at EPA headquarters in Washington, DC.)

For more comments – **or to book a guest for your program via Heartland’s professional TV studio** – please contact Director of Communications Jim Lakely at [media@heartland.org](mailto:media@heartland.org) and 312/377-4000 or (cell) 312/731-9364.

---

“Another week at the EPA, another victory for transparency by Scott Pruitt. For decades, the EPA has improperly claimed massive power to regulate nearly every aspect of our economy and lives. It is long overdue that the EPA should make such data and collection methods available for public review and analysis.”

**Tim Huelskamp, Ph.D.**  
President  
The Heartland Institute  
[thuelskamp@heartland.org](mailto:thuelskamp@heartland.org)  
312/377-4000

*Dr. Huelskamp represented Kansas’ 1<sup>st</sup> District in the House of Representatives from 2011 to 2017.*

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“EPA Administrator Scott Pruitt’s announcement marks the beginning of the end of one of the biggest scandals in the history of public health research and of the Environmental Protection Agency. Badly flawed research on the human health effects of fine particulate matter (PM2.5) conducted during the 1980s and 1990s was used to justify regulations forcing thousands of corporations and hundreds of coal-powered electricity generation plants to close. Subsequent research shows ambient levels of PM2.5 have little or no adverse effects on human health, yet the regulations remain in place, like zombies, killing jobs and endangering public health and well-being by unnecessarily raising the cost of energy and causing unemployment. The Obama administration exploited this corrupt science to wage its war on fossil fuels, a war now thankfully being brought to an end by President Trump.

“Demanding the end of reliance on secret science may be the most consequential decision made by EPA since the election of Donald Trump. This day vindicates the efforts of some real heroes in the public health debate – Dr. Robert Phalen, Dr. James Enstrom, Dr. John Dunn, M.D., and Steve Milloy. It is a day for celebration by everyone who supports sound science and environmental protection.”

**Joseph Bast**  
Director and Senior Fellow  
The Heartland Institute



[jbast@heartland.org](mailto:jbast@heartland.org)

312/377-4000

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“It is amazing that the public ever allowed a government agency supported by their taxes to hide the information used to restrict their lives through regulation. It is only surprising that the leftist EPA and our court system allowed this to take place for so long. EPA Administrator Scott Pruitt is finally reining in the out of control regulatory process.

**Jay Lehr**

Science Director

The Heartland Institute

[jlehr@heartland.org](mailto:jlehr@heartland.org)

312/377-4000

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“This is one small step for regulatory reform, one giant leap for scientific integrity and political transparency.

“Transparency and reproducibility are part of the very foundation of scientific progress. EPA should never rely on non-public scientific data when crafting rules, guidance documents, or when undertaking other agency actions. This same approach should be true for every administrative agency. When writing rules, regulators should only be allowed to consider scientific studies whose researchers make their data available for public scrutiny and whose findings can be replicated.”

**H. Sterling Burnett**

Senior Fellow, Environment & Energy Policy

The Heartland Institute

Managing Editor, *Environment & Climate News*

[hburnett@heartland.org](mailto:hburnett@heartland.org)

214/909-2368

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“The end of ‘secret science’ at EPA is very big news and you know it’s an important step by the volume and hysteria of Administrator Pruitt’s critics. The critics of this move understand that the Endangerment Finding and other over-reaching regulations are based on black box ‘secret science’ that cannot stand up to prudent review.

“Requiring all underlying data to be made public before a study can be used to set policy is just common sense. My junior high algebra teacher made me show my work to get credit for a test answer. If it’s good enough for junior high, we should hold EPA to at least that level of transparency.

“The ginned up attack on Scott Pruitt is intended to stop him from exposing the bogus ideological foundation of EPA regulation. But, it is not working. Kudos to Administrator Pruitt, his team at EPA, and the Trump administration.”

**Bette Grande**

Research Fellow, Energy Policy

The Heartland Institute

[governmentrelations@heartland.org](mailto:governmentrelations@heartland.org)

312/377-4000

---

*Ms. Grande represented the 41<sup>st</sup> District in the North Dakota Legislature from 1996 to 2014.*

---

“Much to Administrator Scott Pruitt’s credit, the EPA has decided to end the use of ‘secret science’ as a basis for regulatory actions that have damaged our economy, put companies out of business, and harmed consumers.

“During the Obama administration, the EPA wantonly destroyed 94 percent of the market value of the coal industry, killed thousands of coal mining jobs, and wreaked havoc on coal mining families and communities — all based on data the EPA and its taxpayer-funded university researchers have been hiding from the public and Congress for more than 20 years.

“Administrator Pruitt’s decision to bring science back into the sunlight spells the end of ‘secret science,’ which has fueled overregulation by the EPA for years. Second only to President Trump himself, Administrator Pruitt is the most valuable public servant America has.”

**Steve Milloy**

Senior Policy Fellow, E&E Legal  
Policy Advisor, The Heartland Institute  
[media@heartland.org](mailto:media@heartland.org)  
312/377-4000

*Mr. Milloy is the author of Scare Pollution: Why and How to Fix the EPA (2016).*

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The Heartland Institute is a 34-year-old national nonprofit organization headquartered in Arlington Heights, Illinois. Its mission is to discover, develop, and promote free-market solutions to social and economic problems. For more information, visit [our website](http://our website) or call 312/377-4000.

This email was sent to [jlakely@heartland.org](mailto:jlakely@heartland.org)  
The Heartland Institute, 3939 North Wilke Road, Arlington Heights, IL 60004, United States  
[Unsubscribe](#)

Message

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**From:** Hewitt, James [hewitt.james@epa.gov]  
**Sent:** 9/10/2018 7:44:58 PM  
**To:** Kevin Bogardus [kbogardus@eenews.net]; Konkus, John [konkus.john@epa.gov]; Abboud, Michael [abboud.michael@epa.gov]; Block, Molly [block.molly@epa.gov]; Press [Press@epa.gov]  
**Subject:** RE: Administrator Wheeler's private calendar

Kevin,

Please see our answers in bold below and you may attribute to EPA Spokesperson James Hewitt.

---

**From:** Kevin Bogardus [mailto:kbogardus@eenews.net]  
**Sent:** Monday, September 10, 2018 2:02 PM  
**To:** Konkus, John <konkus.john@epa.gov>; Abboud, Michael <abboud.michael@epa.gov>; Hewitt, James <hewitt.james@epa.gov>; Block, Molly <block.molly@epa.gov>; Press <Press@epa.gov>  
**Subject:** Administrator Wheeler's private calendar

Hey everyone,

Hi, it's Kevin Bogardus with E&E News.

I'm working on a story about Administrator Wheeler's private calendar, which I obtained under the Freedom of Information Act ([https://www.eenews.net/assets/2018/09/10/document\\_pm\\_02.pdf](https://www.eenews.net/assets/2018/09/10/document_pm_02.pdf)). The calendar runs from April 20 to July 6, 2018, which was when Administrator Wheeler was deputy EPA administrator, and offers more detail than his public calendar on who he was meeting with and what he was discussing (<https://www.epa.gov/senior-leaders-calendars/calendar-andrew-wheeler-acting-administrator>). I had a few questions about this, which are:

- On June 5 from 11 to 11:30 am, Administrator Wheeler had a meeting with Steve Milloy with Jon Toomey, who appears to be a lobbyist for Fitzgerald Peterbilt, which sells glider kits (please see page 200). On Administrator Wheeler's public calendar, this same time slot is listed as "general discussion." Why didn't EPA disclose that this meeting was with Fitzgerald Peterbilt and/or about glider kits?

**"Multiple topics pertaining to the Agency were discussed in this meeting, hence 'general discussion.'"**

- Did Administrator Wheeler meet with any environmental groups during this time period? If so, who and when? We are looking for examples in the document.

**"We'll refer you to the document but one such meeting was with Collin O'Mara, President and CEO of National Wildlife Federation, which took place on June 21<sup>st</sup>."**

**On background: He also met with the Chesapeake Bay Commission on May 3<sup>rd</sup>.**

- Administrator Wheeler did have several meetings with industry officials and lobbyists, which was a criticism of former EPA Administrator Scott Pruitt when he was at the agency. How does one get a meeting with Administrator Wheeler? Is he open to meeting with any interested parties?

**"Administrator Wheeler is open to meeting with all stakeholders."**

I do plan to note that Administrator Wheeler also had several meetings with EPA staff and other Trump administration officials in my story.

Please get back to me as soon as possible. My deadline is 4 pm EST today but the sooner you get back to me, the more it helps my reporting. Thank you for your help.

**Kevin Bogardus**

E&E News reporter

[kbogardus@eenews.net](mailto:kbogardus@eenews.net)



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EnergyWire, ClimateWire, E&E Daily, Greenwire, E&ENews PM

Message

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**From:** Joseph Bast [JBast@heartland.org]  
**Sent:** 2/20/2018 8:39:31 PM  
**Subject:** Epidemiology standards petition transmitted to White House  
**Attachments:** Epidemiology petition 02202018.pdf

Excellent work by Steve Milloy, attached.

Joe

Joseph Bast  
Director and Senior Fellow  
The Heartland Institute  
3939 N. Wilke Road  
Arlington Heights, IL 60004  
Phone [ Ex. 6 Personal Privacy (PP) ]  
Email jbast@heartland.org  
Web site <http://www.heartland.org>

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# JunkScience.com

February 20, 2018

President Donald J. Trump  
The White House  
1600 Pennsylvania Ave., N.W.  
Washington, D.C. 20500

Re: Petition for Federal Standards to Stop Overregulation Based on Junk  
Epidemiology

Dear President Trump,

I am submitting this petition under the First Amendment right to petition the federal government to redress grievances. I request that you issue Executive branch-wide standards for the use of epidemiology studies by regulatory agencies.

An alternative request is that you direct regulatory agencies to issue their own such standards via public notice and comment. Pending the issuance of such standards, regulatory agencies should be ordered to suspend all use of epidemiology studies pending review under the new standards.

This petition is consistent with your initiative to reduce overregulation that hurts the economy without providing commensurate or even any benefit.

Just one example of the significance of the problem of junk epidemiology is President Obama's key war-on-coal regulations issued by the U.S. Environmental Protection Agency (EPA). As you know, these rules were responsible for destroying about 94% of the market value of the coal industry and killing many thousands of coal industry jobs during the period 2011-2016 without providing any health, environmental or economic benefits whatsoever. The rules in question were "justified" on the basis of about \$600 million worth of EPA-funded epidemiologic studies. These studies relied on secret data, and were either poorly or even fraudulently conducted and reviewed.

You justifiably complain about "fake news." This petition would go a long way toward preventing the "fake science" that has been unjustifiably harming our economy and standard of living for decades.

## **Background**

Epidemiology is the statistical study of the incidence of disease in human populations. Importantly, epidemiology is merely a branch of statistics; it is not

Page 1 of 4

12309 Briarbush Lane. Potomac, MD 20854  
Tel: 301.258.9320. Email: milloy@me.com

ED\_002752\_00007233-00001

science. Epidemiology does not provide biological or medical explanations (i.e., physical plausibility) for its purported results.

Epidemiology's statistical nature is most useful when looking for high rates of rare disease in a population. The classic examples of properly applied epidemiology are food poisoning incidents and the link between heavy smoking and lung cancer.

Unfortunately, however, overzealous regulatory agencies have been disregarding the limitations of epidemiology for almost 30 years. They often pretend that epidemiology is a complete science, not merely statistics. They often improperly use epidemiology to study low rates of common diseases.

The data used in epidemiology studies is often of such poor quality that epidemiologists refuse to share their data with independent researchers for purposes of replicating and verifying results, a tradition fundamental to the scientific method. In the case of EPA's war-on-coal rules, EPA-funded researchers have been hiding data from public review for more than 20 years — even defying the request of EPA's own statutorily mandated science advisory board and Congressional subpoena for the data.

The abuse of epidemiology by federal regulatory agencies can be exemplified to laymen by comparing the number of deaths attributed to smoking against the number of deaths attributed to blue-sky clean air.

The Department of Health and Human Services claims that smoking kills about 440,000 people per year. But the Obama EPA claimed that fine particulate matter (soot and dust called "PM<sub>2.5</sub>") in everyday blue-sky outdoor air kills 570,000 per year. So, smoking kills 440,000 while blue-sky outdoor air kills almost 30 percent more on an annual basis? One can easily understand why the EPA-funded epidemiologists have been hiding their data for 20-plus years.

### **Current Epidemiologic Standards in the Federal Government**

The first effort to issue standards for interpreting epidemiology studies was articulated by famed British epidemiologist Sir Austin Bradford Hill in 1965. Hill almost uncannily foresaw the most common abuse of epidemiology we see today — i.e., inappropriate reliance on weak statistical correlations (also called "weak associations") that likely reflect only poor data quality or chance, versus meaningful results.

The adage "correlation is not causation" should come to mind here. Not only is the adage true, but also weak correlations (or weak associations) never portend causation. Weak associations are just meaningless, statistical noise. There is not a single example in the scientific literature of a weak association epidemiology study whose reported association turned out to be scientifically valid.

The Obama EPA used this statistical noise to unjustifiably wreak havoc on the coal industry.

While Hill's criteria do appear in some agency guidance documents concerning the use and interpretation of epidemiology, they uniformly omit Hill's warning about the unreliability of weak associations. As a consequence, regulatory-happy federal agencies often disregard Hill's standards and misinterpret statistical noise as cause-and-effect relationships in order to justify their (over)regulatory agendas.

Though the federal courts have received some guidance on the interpretation of epidemiology from the National Academy of Sciences and an international standards group (Grading of Recommendations Assessment, Development and Evaluation or "GRADE") has issued some standards for interpreting epidemiology studies, federal regulatory agencies have remained oblivious and their misuse and abuse of epidemiology is ongoing.

Congress has also tried to rein in the abuse of epidemiology. The House-passed HONEST Act would require that epidemiologic data relied on by EPA be made available to the public for purposes of verification and study replication. Although the bill has passed the past three House sessions, it has been stranded in a Senate that requires 60 votes to pass a bill.

### **The Lack of Epidemiology Standards Threatens Efforts to Reduce Overregulation**

It is a safe bet that virtually all epidemiology-based federal regulatory efforts over the past 25 years or so may be considered as "fake science" or "junk science." This is because federal agencies, especially the EPA, have taken actions or issued warnings or regulations based on the statistical noise that is weak association epidemiology. This "fake science" should be held up to new robust federal epidemiology standards, and then validated or discarded based on its actual merits. Otherwise any deregulatory agenda is at severe risk of failure or rollback.

Consider the EPA's proposed repeal of the Obama war-on-coal rule known as the Clean Power Plan (CPP). Although the CPP is ostensibly a rule addressing greenhouse gas emissions, the Obama EPA actually justified the rule on the basis that reduced coal plant greenhouse gas emissions would necessarily mean reduced emissions of the afore-mentioned PM<sub>2.5</sub> from coal plants.

As the Obama EPA had determined (by secret science-based weak association epidemiology) that PM<sub>2.5</sub> was associated with thousands of premature deaths annually (each valued by EPA via junk economics at about \$9 million), the CPP was "determined" by the Obama EPA to provide billions of dollars in benefits annually — an imaginary amount of benefits that far exceeded the actual multi-billion estimated compliance costs of the CPP.



The Trump EPA has proposed to repeal the CPP the basis that PM<sub>2.5</sub> causes no deaths at current levels — essentially ignoring the fake science of previous EPAs on PM<sub>2.5</sub>. This more realistic view of PM<sub>2.5</sub> reduced the CPP's estimated and imaginary benefits to well below its actual compliance costs.

Reducing the overregulation of all the PM<sub>2.5</sub>-dependent the war-on-coal rules — including the Cross-State Air Pollution Rule and Mercury Air Transport Standard (MATS) — requires a review of the PM<sub>2.5</sub> epidemiology under new standards. The Obama EPA's onerous and benefit-less ozone air quality standards also depend on the PM<sub>2.5</sub> fake science. It would be possible to reduce that rule's expensive and pointless overregulation by reviewing its underlying science under sound principles and standards for epidemiology.

## **Conclusion**

I have enclosed with this petition a copy of my recent book, "Scare Pollution: Why and How to Fix the EPA." Please note that Sen. Jim Inhofe and Dr. George Wolff, a former chairman of the EPA's Clean Air Act Scientific Advisory Committee, have both endorsed "Scare Pollution." The book explains in more detail much of what is mentioned in this letter.

Epidemiology has been grossly abused by regulators and university researchers for so long, the vast majority of epidemiologists no longer care whether their work is charitably described as "garbage-in, garbage-out."

That situation may be fine for agenda-driven regulators and their grant-hungry university epidemiologists, but it is a terribly destructive situation for the economy, taxpayers and science.

I am happy to answer any questions you may have.

Sincerely,

/s/

Steve Milloy, MHS, JD, LLM  
Publisher  
Trump EPA Transition Team member

Enclosure: *Scare Pollution: Why and How to Fix the EPA*

Message

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**From:** Joseph Bast [JBast@heartland.org]  
**Sent:** 11/5/2017 2:39:41 PM  
**Subject:** Junkscience.com posts my comments about the Climate Science Special Report

My comments below are also available online at:

<https://junkscience.com/2017/11/joe-bast-scientific-critique-of-usgcrps-2017-climate-science-special-report/>

Nice ad on this site for the NRDC. Hmm. Sleeping with the enemy, Steve?

Joe

---

**From:** Joseph Bast  
**Sent:** Friday, November 03, 2017 1:47 PM  
**Subject:** Climate Science Special Report released

The Climate Science Special Report, "volume one of the Fourth National Climate Assessment," was released a few minutes ago. The entire report can be found here: <https://science2017.globalchange.gov>

But in August the Trump administration disbanded the interagency committee that was working on the report:

[https://www.washingtonpost.com/news/energy-environment/wp/2017/08/20/the-trump-administration-just-disbanded-a-federal-advisory-committee-on-climate-change/?utm\\_term=.5c0daa1fba41](https://www.washingtonpost.com/news/energy-environment/wp/2017/08/20/the-trump-administration-just-disbanded-a-federal-advisory-committee-on-climate-change/?utm_term=.5c0daa1fba41)

Not sure why it was nevertheless released... probably the deep state at work. Here were my reactions to this report, from my earlier review of the draft back in August.

### **Scientific Critique of USGCRP's 2017 Climate Science Special Report**

The U.S. Global Change Research Program (USGCRP) is a joint program of 13 U.S. national government agencies charged with developing a program to "understand, assess, predict, and respond to" global climate change. It produces reports to Congress every four years titled "National Climate Assessment." The three reports released to date have all exaggerated the amount of global warming, the human role in that warming, the negative impacts of the same, and the certainty of the science surrounding the causes and consequences of climate change. For example, a team of climate scientists led by Patrick Michaels of the Cato Institute said of the Third National Climate Assessment:

"This National Assessment is much closer to pseudoscience than it is to science. It is as explanatory as Sigmund Freud. It clearly believes that virtually everything in our society is tremendously dependent the surface temperature, and, because of that, we are headed towards certain and inescapable destruction, unless we take its advice and decarbonize our economy, pronto. Unfortunately, the Assessment can't quite tell us how to accomplish that, because no one knows how."

<https://object.cato.org/sites/cato.org/files/pubs/pdf/the-missing-science-of-draft-assessment.pdf>

The latest (June 28) draft of the Fourth National Climate Assessment is similarly flawed. This brief critique makes ten points which track the content and organization of the assessment:

1. The report is a **legacy product** of a political regime that captured and “weaponized” this government agency to advance its agenda, much as it did to the IRS, Justice Department, and other departments. The report was written by hold-overs from the Obama administration, and represents only the very biased and politicized perspective of a small clique of government scientists on a complex issue.

2. The report **fails to provide an objective and comprehensive review** of the available literature. Contrary to media reports, the report was not made available to respected climate scientists for peer reviewed. Several scientists report that their requests for drafts were rejected. [Soon and Happer, others?] The final draft shows no evidence of being informed by the efforts of critics of the Obama administration’s legislative agenda or even a single reference to the multiple reports of the Nongovernmental International Panel on Climate Change (NIPCC).

3. The report **relies on past reports by the United Nation’s Intergovernmental International Panel on Climate Change (IPCC)**, which the Trump administration properly rejects. The report refers to the IPCC’s 2013 report as “rigorously-reviewed international assessments,” when in fact the IPCC is controversial, scandal-ridden, and its procedures fall far short of the requirements of the Data Quality Act. [*Why Scientists Disagree*, pp. 38-44]

4. The report’s most frequently quoted conclusion, “that it is *extremely likely* that human influence has been the dominant cause of the observed warming since the mid-20<sup>th</sup> century,” is **only a restatement of the opinions of activists and advocates in the field of global warming**, and *not* a statement about the underlying science, which remains incomplete and uncertain. This is the same flawed reasoning and semantic games as used by the IPCC to make the same statement. It is not a statement of scientific fact, but rather of “some experts’ opinions” without any basis in probability analysis or scientific forecasting. [*InterAcademy Council Audit*, p. 61ff]

5. The report **denies the existence of the “pause” in global warming** during the past 18 years or longer, something even the IPCC admits. It cites manipulated and unreliable databases when superior databases are readily available, apparently in an effort to once again “hide the decline.”

6. The report **ignores at least 27 peer-reviewed articles saying climate sensitivity** is lower than the amount assumed by IPCC and EPA. Climate sensitivity is the amount of temperature change likely to result from a doubling of the concentration of CO<sub>2</sub> in the atmosphere from pre-industrial times. If the climate is less sensitive to CO<sub>2</sub> than we thought four years ago, this report ought to reflect that fact. [Cited in Monckton, Soon, Legates, and Briggs 2015; reproduced in *Why Scientists Disagree* pp 66-69]

7. The report **denies extensive evidence that weather is not becoming more extreme** over time and physical evidence explaining why it will be less extreme in a warmer world. It recites Al Gore’s litany of extreme weather predictions even though IPCC and independent scholars have thoroughly debunked it. [Chapter 7 of CCR-II: Physical Science]

8. The report repeats **false claims about the loss of arctic sea ice** – falsifying trends and causes and making false forecasts – in order to support its narrative of catastrophic man-made global warming. Arctic sea ice is not at historic low levels, it varies naturally due to known and unknown external forcings and internal variability, and it is not evidence of a human impact on climate. [Chapter 5 of CCR II: Physical Science]

9. The report **misrepresents scenarios and computer-based simulations of future climate conditions as scientific forecasts of future climate conditions**, when in fact it is well known among scientists that future climates cannot be predicted. Prof. Scott Armstrong, the world’s leading authority on scientific forecasting, and coauthors have shown conclusively that the predictions made by the IPCC, EPA, and

other government agencies are merely the opinions of some experts, not scientific forecasts, and cannot provide a reliable basis for public policy.

10. The report **misrepresents sea-level rise and changes in ocean pH levels**, portraying both as dire catastrophes resulting from man-made global warming, when in fact there is considerable evidence that sea level has not accelerated from its historic rates and considerable evidence that higher pH levels have positive as well as adverse effects on ocean life. [[Chapter 6 of CCR-II: Physical Science](#)]

Joe

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Message

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**From:** Joseph Bast [JBast@heartland.org]  
**Sent:** 1/9/2018 5:54:37 PM  
**To:** Stan Young [Ex. 6 Personal Privacy (PP)]; James E. Enstrom [jenstrom@ucla.edu]  
**Subject:** "No dose response" letter to editor  
**Attachments:** Young 2018 no dose response DR.pdf

This letter brilliantly summarizes the state of play in the PM 2.5 debate, complete with footnotes, and published in a peer-reviewed academic journal. (Of course, letters to the editor are not peer-reviewed, so don't make the mistake of mis-labeling this letter.)

John Dunn and Steve Milloy repeatedly urge us to call out the PM 2.5 fraud with just as much energy and erudition as we do the CO2 fraud, and he is right. If the AGW campaign ended today, coal-powered plants would still be shut down tomorrow under the fake PM 2.5 science.

Our goal should be energy freedom, not winning an increasingly obscure and irrelevant science debate. Ending EPA's war on fossil fuel requires repeal of Obama-era regulations, taxes, and subsidies that were justified by appeals to CO2 *and* PM 2.5. This letter and the articles it cites helps us achieve that goal.

Joe

---

**From:** Stan Young [Ex. 6 Personal Privacy (PP)]  
**Sent:** Tuesday, January 09, 2018 6:59 AM  
**To:** Jim Enstrom; Steve Milloy; John Dunn  
**Cc:**  
**Subject:** "No dose response" letter to editor

All:

A letter to the editor in response to Jim's paper in Dose Response is now available.

"Thank you for choosing to publish **Evidence supporting no dose response of mortality to air quality** in *Dose-Response*! Your article is now published online and fully available to all readers at [journals.sagepub.com/doi/full/10.1177/1559325817750485](https://journals.sagepub.com/doi/full/10.1177/1559325817750485)."



# Evidence Supporting No Dose Response of Mortality to Air Quality

S. Stanley Young<sup>1,2</sup>

Dose-Response:  
An International Journal  
January-March 2018:1  
© The Author(s) 2018  
Reprints and permission:  
sagepub.com/journalsPermissions.nav  
DOI: 10.1177/1559325817750485  
journals.sagepub.com/home/dos



Enstrom<sup>1</sup> does a reanalysis of a large national cohort study and, unlike the original authors, finds no effect of small particulate matter, PM<sub>2.5</sub>, on total mortality. This result, if true, calls into question the current U.S. Environmental Protection Agency, EPA, paradigm that PM<sub>2.5</sub> is causal of increased mortality. Logically it takes only one valid negative study to invalidate all association studies. In a response to a request from the EPA to suggest regulations in need of examination,<sup>2</sup> Young<sup>3</sup> points to 21 studies, including Enstrom,<sup>1</sup> that find no evidence of an association PM<sub>2.5</sub> with mortality. Two of these studies are essentially experiments that directly negate causality.<sup>4-5</sup> Also, Young<sup>6</sup> analyzed a very large time series data set from California, years 2000 to 2012, 8 air basins, over 37 000 days of exposure, and found no effect of PM<sub>2.5</sub> on mortality. Young<sup>6</sup> provides their analysis code and their analysis data set. Anyone asserting a causal relationship should make their data sets public. Logically, the game is over. Enstrom drives an important stake into the heart of EPA asserted causality.

## References

1. Enstrom JE. Fine Particulate Matter and Total Mortality in Cancer Prevention Study Cohort Reanalysis. *Dose Response*. 2017:1-12.
2. Federal Register. EPA-HQ-OA-2017-0190; FRL-9961-60- OP: Evaluation of Existing Regulations. 2017. Accessed February 2017. The EPA has removed pointers to this area.
3. Young SS. EPA-HQ-OA-2017-0190-36647. Tracking Number: 36647. 2017. <https://www.regulations.gov/docket?D=EPA-HQ-OA-2017-0190>. View all documents and comments in this Docket, Search for 36647. Accessed February 2017. The EPA has removed pointers to this area. Contact author for comments.
4. Chay K, Dobkin C, Greenstone M. The Clean Air Act of 1970 and Adult Mortality. *Journal of Risk and Uncertainty*. 2003;27(3):279-300.
5. Zu K, Tao G, Long C, Goodman J, Valberg P. Long-range fine particulate matter from the 2002 Quebec forest fires and daily mortality in Greater Boston and New York city. *Air Quality, Atmosphere & Health*. 2016;9(3):213-21.
6. Young SS, Smith RL, Lopiano KK. Air quality and acute deaths in California, 2000-2012. *Regulatory Toxicology and Pharmacology*. 88(2017):173-184.

<sup>1</sup> American Statistical Association, Raleigh, NC

<sup>2</sup> American Association for the Advancement of Science, Raleigh, NC

## Corresponding Author:

S. Stanley Young, Fellow of the American Statistical Association and Fellow of the American Association for the Advancement of Science, Raleigh, North Carolina.

Email: [genetree@bellsouth.net](mailto:genetree@bellsouth.net)



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**From:** Joseph Bast [JBast@heartland.org]  
**Sent:** 10/16/2017 1:39:41 PM  
**Subject:** WSJ: Steve Milloy on Clean Power Plan/PM2.5

Great piece by Steve Milloy in today's WSJ. Please add your comments. See [www.junkscience.com](http://www.junkscience.com) for more details.

Joe

<https://www.wsj.com/articles/the-clean-power-plans-counterfeit-benefits-1508104504>

- OPINION
- COMMENTARY

# The Clean Power Plan's Counterfeit Benefits

The Obama EPA claimed its regulation would have a \$55 billion payoff. You'll never believe how.

*By Steve Milloy*

Oct. 15, 2017 5:55 p.m. ET

2 COMMENTS

The Environmental Protection Agency's proposed repeal of the Obama administration's Clean Power Plan is a milestone. No Republican administration has ever mustered the courage to roll back a major EPA regulation. In a clever twist, the Trump administration has done so by directly challenging the plan's purported health benefits.

Although the Clean Power Plan was pitched as a way to reduce emissions of greenhouse gases from coal-fired power plants, averting climate change was not how the Obama EPA justified the rule. In 2015 House Science Committee Chairman Lamar Smith forced Obama's EPA administrator, Gina McCarthy, to acknowledge that the plan would produce no change to global temperatures. Instead, the EPA justified the net benefit of the rule based on collateral reductions in power plants' emissions of fine particulate matter. In regulatory parlance, this soot is called PM2.5.

While the compliance costs to industry of the Clean Power Plan could be as high as \$33 billion a year, the Obama EPA claimed that the economic benefits from reducing PM2.5 emissions would be even larger—as much as \$55 billion a year.

What are the supposed \$55 billion in economic benefits? That sum is intended to represent the value of thousands of premature deaths allegedly prevented every year by the Clean Power Plan via the co-benefit of reduced PM2.5 emissions. The EPA values lives “saved” at around \$9 million each. Thousands times millions equal billions.

EPA staff invented this calculus in 1996 to justify the agency’s first effort to regulate PM2.5, although there’s no scientific evidence, then or now, to support the notion that particulates in outdoor air kill people. The EPA regulated them anyway, stiff-arming not only the Republican-controlled Congress’s demands for proof of the danger of PM2.5 emissions but the objections of then-Vice President Al Gore, who thought the rule too costly.

The Clean Air Act requires air-quality standards for pollutants such as PM2.5 be set at a “safe” level. The EPA has long claimed that there is no safe level of exposure to PM2.5 and that inhalation can cause death within hours. But the EPA could never lower the PM2.5 standard to zero because such a standard could not be attained even if the economy was entirely shut down.

The Trump EPA has now largely jettisoned the notion that PM2.5 is a killer by slashing the supposed economic benefits of reduced emissions by \$29 billion per year. That nets out favorably against the rule’s anticipated annual costs of as much as \$33 billion.

A robust body of scientific literature—from large epidemiologic studies to clinical research to historical air-quality data—supports the EPA’s reversal. Standing against it are a few decades of dubious agency-funded studies, the underlying data for which the agency has kept well hidden in order to prevent independent analyses. The Obama EPA even defied a congressional subpoena in order to keep its PM2.5 epidemiologic secret.

EPA chief Scott Pruitt has hailed repeal of the Clean Power Plan as the end of the Obama administration’s “war on coal.” It’s more like the beginning of the end. New York’s Democratic Attorney General Eric Schneiderman and green groups have already announced they will sue. Good luck. When the Supreme Court voted to stay the Clean Power Plan in February 2016, it was a clear signal that the coal industry and red-state plaintiffs would prevail on the merits in any future legal challenge. The EPA’s acknowledgment that the Clean Power Plan has no economic or climate benefits is the final nail in the regulation’s coffin.

*Mr. Milloy served on the Trump EPA transition team and is the author of “Scare Pollution: Why and How to Fix the EPA” (Bench Press 2016).*



**From:** Joseph Bast [JBast@heartland.org]  
**Sent:** 11/13/2017 3:21:11 PM  
**Subject:** Heartland's America First Energy Conference in Courthouse News

<https://www.courthousenews.com/right-wing-groups-accuse-epa-using-junk-science/>

Courthouse News  
November 13, 2017

## Right-Wing Groups Accuse EPA of Using ‘Junk Science’

November 13, 2017 CAMERON LANGFORD

HOUSTON (CN) – The U.S. Environmental Protection Agency “was always junk science-fueled” and the government should get “out of science,” so arctic drilling and a revived coal industry can boost the economy, speakers said at a fossil fuels conference in Houston sponsored by right-wing groups whose work was praised by EPA Administrator Scott Pruitt.

The Heartland Institute advocates for decreased government regulation and has been described as the leading U.S. organization pushing climate-change skepticism. The Illinois-based institute hired former Kansas congressman and Tea Party Caucus Chairman Tim Huelskamp as its president in July.

Several conservative groups and political action committees cosponsored the conference, including The Heritage Foundation, the Americans for Prosperity Foundation and the Ayn Rand Institute. David Koch, a top executive at the energy and commodities conglomerate Koch Industries, founded Americans for Prosperity.

To celebrate the first anniversary of Trump’s election, The Heartland Institute held an America First Energy Conference on Thursday at a Houston hotel, where Pruitt praised its work in a taped message.

Since taking over the EPA in February, Pruitt has rolled back President Barack Obama’s Clean Power Plan to reduce carbon dioxide emissions from power plants, and withdrawn the Waters of the United States rule, claiming it puts too many bodies of water, even dry creek beds, under federal jurisdiction.

“The attitude before we arrived said that you can’t be about growth and jobs and also be a good steward of the environment,” Pruitt said via video. “That’s inaccurate. That’s a false narrative.

“I want to say to you at The Heartland Institute, thanks for what you are doing to advance energy. Thank you for what you’re doing to advance natural resources. We’ve been blessed immensely as a country.”

Several panels focused on how the EPA is changing under Trump and Pruitt, and multiple panelists criticized the agency’s history in the pre-Trump era.

“The EPA was always junk science-fueled,” said Steve Milloy, founder of JunkScience.com and author of “Scare Pollution: Why and How to Fix the EPA,” during a “Reforming EPA” panel.

“We need to get government out of science, especially in the EPA,” he said.

Milloy claimed the Obama administration paid climate scientists to doctor data to bolster the narrative that fossil fuels contribute to global warming.

Panelists said they want to undo the Endangerment Finding, an official proclamation from the EPA in 2009 that says greenhouse gases are driving global warming.

Milloy’s prescription for the agency is simple: “We want to shrink the EPA,” he said.

One panelist likened Trump’s industry-friendly stance on climate change to a holiday.

“We had a door opened, and it was opened when Trump was elected president. ... It’s like Christmas,” said David Stevenson, director of the Center for Energy Competitiveness at the Caesar Rodney Institute and a member of Trump’s EPA transition team.

For The Heartland Institute, the consensus among world scientists that burning fossil fuels and their release of carbon dioxide is heating the planet and increasing the frequency and intensity of natural disasters is blasphemy. They say carbon dioxide is good for the Earth.

“Carbon dioxide is vital plant food,” said Paul Driessen, senior fellow at the nonprofit institutes the Committee for a Constructive Tomorrow and the Center for the Defense of Free Enterprise.

Driessen called carbon dioxide “the miracle molecule that makes life on Earth possible. Rising atmospheric CO<sub>2</sub> levels are actually greening our planet by spurring crop, forest and grassland plants to grow faster and better for the past three decades,” Driessen said.

“Plant experts say that some 70 percent of that greening is due to higher levels of atmospheric carbon dioxide and that too is an enormous dividend worth countless billions and maybe even trillions of dollars.”

But authors of the “Greening of the Earth” study, published in the journal *Nature Climate Change* in April 2016, which Driessen cited, found that while carbon dioxide does contribute to greenery, the long-term impacts could be limited.

“Studies have shown that plants acclimatize, or adjust, to rising carbon dioxide concentration and the fertilization effect diminishes over time,” co-author Dr. Philippe Ciais, associate director of the Laboratory of Climate and Environmental Sciences in France, said in an interview with NASA.

But Heartland panelist John Dunn, a retired physician and licensed attorney, said he shares Driessen’s optimism for a world with abundant carbon dioxide.

“I would rather be in a warm place than a cold place,” Dunn said.

The United States gets about one-third of its electricity from coal and one-third from natural gas. The rest comes from nuclear plants and wind and solar power, according to conference panelists.

Many scoffed at the idea that wind and solar power will soon become the dominant forms of energy production in the United States.

“The environmentalists have this dream of everything running by solar power and wind, and we know that’s not going to happen,” said Richard Trzupek, a chemist and consultant for an Illinois engineering firm.

He said the U.S. Energy Information Administration did a study under the Obama administration that predicted the percentage of energy the country will get from wind and solar will increase to just 17 percent by 2040.

“I think it shows that the real choices we are going to be making here are between coal and nuclear and natural gas,” he said.

Louisiana Attorney General Jeff Landry, a Republican and Tea Party member, said in a high-energy speech that growing up in Louisiana, where 80,000 jobs are directly tied to the energy industry, he came to appreciate that oil and gas drilling has built the middle class better than any industry in the United States.

Landry represented Louisiana in the U.S. House of Representatives from 2011 to 2013.

Louisiana loses about a football field of coastal land every 100 minutes to erosion caused by canals and pipelines installed for oil and gas extraction, according to a recent study by the U.S. Geological Survey. The study wasn't mentioned at the conference.

Heartland Institute research fellow Isaac Orr said that hydraulic fracturing and horizontal drilling, which let drillers extract oil and gas from shale, caused oil prices to drop from more than \$100 a barrel in 2013 to around \$55 today.

“Rising oil and gas production in the United States has created 1.7 million jobs in the U.S. And low energy prices have saved consumers millions of dollars. And it's also given us a really good competitive advantage when it comes to manufacturing,” Orr said.

“The average family has saved about \$675 per year in gasoline compared to 2013 prices. That's ginormous. Low natural gas prices have saved anywhere between \$181 to \$432 per person [on power bills], depending on the geographical area of the country you're living in,” Orr said.

Joe

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**From:** Joseph Bast [JBast@heartland.org]  
**Sent:** 11/13/2017 3:04:10 PM  
**Subject:** Heartland's America First Energy Conference in the Washington Post

[https://www.washingtonpost.com/news/energy-environment/wp/2017/11/13/these-people-think-trump-is-too-liberal-on-climate/?utm\\_term=.605a6a94725d](https://www.washingtonpost.com/news/energy-environment/wp/2017/11/13/these-people-think-trump-is-too-liberal-on-climate/?utm_term=.605a6a94725d)

Washington Post  
11/13/2017

## These people think Trump is too liberal on climate

By Ramin Skibba November 13 at 7:00 AM

In the first year of his presidency, Donald Trump has withdrawn the United States from the Paris climate agreement, scrapped the Clean Power Plan that sought to cut greenhouse gas emissions from power generation, pushed to open up new areas of the Arctic and Gulf of Mexico to oil drilling, and blocked government climate scientists from presenting at professional conferences.

But for fossil fuel advocates, deregulation crusaders and climate skeptics who gathered in Houston last week for the Heartland Institute's America First Energy Conference, Trump has still not gone far enough.

What Heartland, a free-market think tank based in Chicago, really wants is to revoke the “endangerment finding,” which since 2009 has served as the basis for climate policies and regulations.

That includes the Clean Power Plan, the main plank of Barack Obama's climate program, which would have brought the United States within reach of meeting its commitments to the Paris agreement.

So far, however, Trump and Environmental Protection Agency Administrator Scott Pruitt have not tried to overturn the endangerment finding. And that is a mistake, according to several people at the Heartland conference.

However, Trump and Pruitt are coming under growing pressure to try to scrap the finding from a number of figures who have played an influential role in the administration's thinking about climate change — including two members of the president's transition team who spoke at the Heartland conference: Steve Milloy and David Schnare.

“The endangerment finding is the root of all global warming evil at the EPA, and we're trying to figure out here what is the best way to get that thing reconsidered and undone,” Milloy, an attorney and long-time opponent of the EPA who runs the website JunkScience.com, told the Heartland conference.

“It's not really clear that the administration views this with the same urgency that we do,” he added.

The endangerment finding states that emissions of greenhouse gases such as carbon dioxide and methane from burning fossil fuels count as air pollutants under the Clean Air Act and endanger public health and welfare. It provides the legal justification for the EPA to regulate these harmful gases.

The finding has been repeatedly upheld by the U.S. Court of Appeals for the District of Columbia Circuit and other jurisdictions. Recent scientific studies, including the National Climate Assessment report released earlier this month, have also helped reinforce the finding.

Michael Gerrard, a director of the Sabin Center for Climate Change Law at Columbia University and who was not at the conference, said there is little chance of overturning the finding.

“Those who favor its repeal probably see it as their Hail Mary play — the odds are low, but if they win, they win big,” Gerrard said.

But that did not deter the speakers at the Heartland conference, including Milloy and Schnare.

“The goal here is not to change the policy but to correct the science,” said Richard B. Belzer, an independent consultant on regulatory economics and a fellow at the free-market R Street Institute think tank.

Belzer has also previously worked with the Competitive Enterprise Institute, which, like the Heartland Institute, was once merely a right-wing outlier. The organizations’ libertarian positions put them in the fringe of U.S. politics — only 1 in 10 Americans consider themselves libertarians and know what the term means, according to Pew Research Center survey — yet they have effectively become policy brain trusts of the Trump administration.

Schnare, former director of the Free Market Environmental Law Clinic, called on Trump and Pruitt to coordinate their approach toward the endangerment finding.

“You’re only going to be successful if you get the EPA and [White House’s] Office of Science and Technology Policy working together,” Schnare said.

However, Trump has yet to appoint a White House science adviser.

Schnare argued that to remove the endangerment finding, each line of evidence supporting it needs to be challenged.

Other speakers went on to attack the science behind the finding.

Harry MacDougald, an attorney at an Atlanta law firm who previously worked with the Competitive Enterprise Institute to challenge the endangerment finding, disputed the mainstream scientific consensus that global temperatures have exceeded natural variation and that oceans have become more acidic due to climate change.

The Competitive Enterprise Institute filed a petition to the EPA to reconsider the endangerment finding earlier this year while making similar claims.

Even if climate scientists are right, MacDougald argued, climate regulations would impose a “colossal expenditure.”

That argument — about the costs of cutting emissions — could be gaining traction in Pruitt’s EPA, said Holly Doremus, an environmental law professor at the University of California at Berkeley who was not a participant at the conference. “The EPA is sympathetic to that argument now in a way that it wasn’t in 2009,” she said.

However, Gerrard argued that, for the time being at least, the endangerment finding is on firm ground and that as a result the EPA is legally required to cut greenhouse gas emissions that cause climate change. "I think that Pruitt is being advised that trying to revoke the endangerment finding would be a clear legal loser," he said.

Joe

Joseph Bast  
Chief Executive Officer  
The Heartland Institute  
3939 N. Wilke Road  
Arlington Heights, IL 60004  
Phone Ex. 6 Personal Privacy (PP)  
Email [jbast@heartland.org](mailto:jbast@heartland.org)  
Web site <http://www.heartland.org>

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Message

---

**From:** Gordon, Stephen [gordon.stephen@epa.gov]  
**Sent:** 10/31/2017 4:23:04 PM  
**To:** Woodward, Cheryl [Woodward.Cheryl@epa.gov]; Ford, Hayley [ford.hayley@epa.gov]  
**CC:** Bennett, Tate [Bennett.Tate@epa.gov]; Konkus, John [konkus.john@epa.gov]  
**Subject:** RE: Updated RSVP List for 2pm Event  
**Attachments:** RSVP List 103017.xlsx

Final RSVP List is attached.

Stephen L. Gordon Jr.  
Deputy Director for Public Engagement  
Office of the Administrator  
U.S. Environmental Protection Agency  
(202) 564-1301  
[Gordon.Stephen@epa.gov](mailto:Gordon.Stephen@epa.gov)

---

**From:** Gordon, Stephen  
**Sent:** Tuesday, October 31, 2017 8:19 AM  
**To:** Woodward, Cheryl <Woodward.Cheryl@epa.gov>; Ford, Hayley <ford.hayley@epa.gov>  
**Cc:** Bennett, Tate <Bennett.Tate@epa.gov>; Konkus, John <konkus.john@epa.gov>  
**Subject:** Updated RSVP List for 2pm Event

Cheryl and Hayley,

Updated RSVP list for security desk is attached.

Thank you!

-Stephen

Stephen L. Gordon Jr.  
Deputy Director for Public Engagement  
Office of the Administrator  
U.S. Environmental Protection Agency  
(202) 564-1301  
[Gordon.Stephen@epa.gov](mailto:Gordon.Stephen@epa.gov)

# Advisory Boards Event RSVP

Name	Company	Title
Dr. Roger McClellan (Speaker)		
Dr. Michael Honeycutt (Speaker)		
Dr. Paul Gilman (Speaker)		
Dr. Tony Cox (Speaker)		
Dr. Pat Michaels	Center for the Study of Science at the Cato Institute	Director
Dr. Stanley Young	American Association for the Advancement of Science	Fellow
Dr. Kathryn Clay	American Gas Association	VP of Policy
Dr. Michael Ginevan	M.E. Ginevan & Associates	President
Dr. Rick Becker	American Chemistry Council	Toxicologist
Dr. Kimberly White	American Chemistry Council	Vice President
Dr. Angela Logomasini	Competitive Enterprise Institute	Senior Fellow
Dr. Richard Williams	Mercatus Center	
Dr. Will Happer	Princeton University	Professor
Dr. Mark Herlong	C02 Coalition	Board Member
Dr. Jessica Ryman-Rasmussen	API	Scientific Advisor
Dr. Will Ollison	API	Sr. Scientific Advisory
Rep. Lamar Smith	U.S. House of Representatives	Congressman (TX-21)
Senator Jim Inhofe	U.S. Senate	Seantor (R-Okla.)
Senator Mike Rounds	U.S. Senate	Senator (R-SD)
Keith Appell	CRC Public Relations	Senior Vice President
Howard Feldman	API	Senior Director
Jordan McGillis	Institute for Energy Research	Policy Analyst
Patrick Hedger	Freedom Works	Foundation Program Manager
Tom Pyle	Institute for Energy Research	President
Ross Eisenberg	National Association of Manufacturers	Vice President
Chuck Cunningham	Securing America's Future Energy	Senior Vice President
Kyle Harris	Corn Refiners Association	Manager, Environmental Affairs



Email

Phone

**Ex. 6 Personal Privacy (PP)**

Jennifer Gibson	National Association of Chemical Distributors	VP of Regulatory Affairs
Andy O'Hare	Fertilizer Institute	VP of Public Policy
Christian Bacran	Vinyl Institute	
Aaron Stover	Heartland Institute	Director of Development
Don Parrish	American Farm Bureau Federation	Senior Director
Pam Lacey	American Gas Association	Chief Regulatory Council
Nick Goldstein	American Road & Transportation Builders Association	Assistant General Counsel
Tom Schatz	Citizens against Government Waste	President
Bill Kovacs	US Chamber of Commerce	Senior Vice President
Dan Byers	US Chamber of Commerce	VP, 21st Century Energy Institute
Jake Tyner	US Chamber of Commerce	Policy Associate
Ron Eidshaug	US Chamber of Commerce	VP of Government Relations
Jordan Crenshaw	US Chamber of Commerce	Policy Associate
Steve Milloy	Energy and Environment Legal Institute	
Joe Johnson	US Chamber of Commerce	Executive Director
Kent Lassman	Competitive Enterprise Institute	CEO
Taylor Barkley	Competitive Enterprise Institute	Government Affairs Manager
David Fisher	American Chemistry Council	Senior Director
Paul Teller	White House	Special Assistant to the President
Tim Hunt	American Forest & Paper Association	Senior Director
Dick Doyle	The Vinyl Institute	CEO
William Yeatman	Competitive Enterprise Institute	Senior Fellow
Caleb Osbourne	Arkansas Dept. of Environmental Quality	Associate Director
Mark Mills	Digital Power Group	Founder and CEO
Peter Vicenzi	CO2 Coaliton	Board Member
Mark Carr	Chanell Design Group	Principal
Jennie Wright	Senator Inhofe	Legislative Counsel
Leacy Burke	Senator Inhofe	Communications Director
Myron Ebell	Competitive Enterprise Institute	Director
Angelique Hawk	Harvard University	Environmental Scientist
Joseph Brazauskas	Rep. Lamar Smith's office	Staff Director and Senior Counsel
Kevin Mooney	Daily Signal	

## **Ex. 6 Personal Privacy (PP)**

Many Tharpe	Senator Rounds	
Joe Bliss	Senator Rounds	
Rachel Jones	National Association of Manufacturers	Director of Energy and Resources Policy
Greg Mueller	CRC Public Relations	President

## **Ex. 6 Personal Privacy (PP)**

Message

**From:** Konkus, John [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=555471B2BAA6419E8E141696F4577062-KONKUS, JOH]  
**Sent:** 6/13/2017 11:54:35 AM  
**To:** Jim Lakely [JLakely@heartland.org]  
**BCC:** Konkus, John [konkus.john@epa.gov]  
**Subject:** RE: United States Resets Climate Change Discussion At G7 - Preview

Jim: I hope your travel to Washington was uneventful. I will be covering a Senate Hearing for a POTUS nominee today so will regretfully be unable to attend today's session. However, I wanted to share a few points that I hope, in part, guide today's conversations:

\*The Science Integrity meeting this week was postponed by EPA because of Dr. Gifo's illness. We certainly all wish her health and a speedy recovery. In the meantime, this pause provides all involved the opportunity to coordinate further to ensure the rescheduled meeting is productive and constructive. More industry, more conservative and a broader group of voices will be involved.

My understanding is that Dr. Grifo's illness is serious enough to cause this postponement, so we should all to be respectful of that.

\*Despite the intensity of the attacks from the left, EPA is managing massive changes and reforms. Barbs from the right hurt and hinder this progress. We need MORE support for our efforts. That will lead to much better working partnerships.

\*Our movement and our cause as defined by the Trump Presidency are helped by this group when it recognizes and echoes our achievements including:

- >Getting beyond Paris.
- >Restructuring the EPA around a back to basics agenda.
- >Delivering a budget that would have been unthinkable under any other leadership.
- >Moving over 25 significant OMB actions which is an amazing feat in this short amount of time, including: WOTUS, CPP, and multiple oil and gas rules, just to name a few.

Thank you Jim. Let's connect later this afternoon.

John

---

**From:** Jim Lakely [mailto:JLakely@heartland.org]  
**Sent:** Monday, June 12, 2017 10:54 AM  
**To:** Konkus, John <konkus.john@epa.gov>  
**Subject:** RE: United States Resets Climate Change Discussion At G7 - Preview

Sure. Looking forward to the call.

Do you think you and others at EPA would join us for our strategy meeting in DC on Tuesday and Wednesday? We had planned a program to help with messaging and communications leading up to the meeting Grifo canceled. We're still going on with the meeting.

It will be at the Capitol Skyline Hotel in SW, just a couple blocks north of Nationals Park. Here's the schedule:

Tuesday, June 13 – MC: Jim Lakely		
Time	Speaker	Presentation

2:00 p.m.	Tactics: Steve Milloy	Opening Remarks: What Needs to Be Done I
2:45 p.m.	Science: Jay Lehr	How to Summarize the Scientific Debate in 30 minutes or Less
3:30 p.m.	Speaker Training: Veronica Harrison	Tips for Effective Public Speaking
4:15 p.m.	Law: David Schnare	Inside and Outside EPA: How to Reform the Beast
5:00 p.m.	Wrap-up: Joe Bast	Closing remarks and adjourn
<b>Wednesday, June 14 – MC: Jim Lakely</b>		
9:00 a.m.	Tactics: Myron Ebell	Opening Remarks: What Needs to be Done II
9:45 a.m.	Science: Pat Michaels	Where the Science Debate Stands Right Now
10:30 a.m.	Economics: Kevin Dayaratna	Demolishing the Social Cost of Carbon Argument
11:15 a.m.	Energy Policy: Roger Bezdek	The Case for Fossil Fuels
12:00 p.m.	Speaker Training: Beverly Hallberg, District Media Group	Effective Public Speaking Strategies
1:00 p.m.	Wrap-up: Joe Bast	Closing remarks

Jim Lakely  
Director of Communications  
The Heartland Institute  
3939 North Wilke Drive  
Arlington Heights, IL 60004

O: Ex. 6 Personal Privacy (PP)  
C:

Twitter: @HeartlandInst

---

**From:** Konkus, John [<mailto:konkus.john@epa.gov>]  
**Sent:** Monday, June 12, 2017 9:44 AM  
**To:** Jim Lakely  
**Subject:** United States Resets Climate Change Discussion At G7 - Preview

Jim: I'll call you on this below. Looking for some echo help here...



U.S. ENVIRONMENTAL PROTECTION AGENCY  
**NEWS RELEASE**  
[WWW.EPA.GOV/NEWSROOM](http://WWW.EPA.GOV/NEWSROOM)

## United States Resets Climate Change Discussion At G7

# *U.S. Formally Joins Communiqué, Reaching Consensus On Important Environmental Issues*

June 12, 2017

**Bologna, Italy** - Today, U.S. Environmental Protection Agency Administrator Scott Pruitt announced that the United States stands firm on its decision to withdraw from the Paris Agreement and has reset the conversation about climate change reflective of the new priorities of the Trump Administration and the expectations of the American people.

**“Respective of the importance to engage with longstanding allies and key international partners, we approached the climate discussions head on from a position of strength and clarity. We are resetting the dialogue to say Paris is not the only way forward to making progress. Today's action of reaching consensus makes clear that the Paris Agreement is not the only mechanism by which environmental stewardship can be demonstrated. It also demonstrates our commitment to honest conversations, which are the cornerstone of constructive international dialogue, ”** said Administrator Scott Pruitt.

While a party to the communiqué, the United States did not join the climate change sections, explicitly stating:

We the United States of America continue to demonstrate through action, having reduced our CO2 footprint as demonstrated by achieving pre-1994 CO2 levels domestically. The United States will continue to engage with key international partners in a manner that is consistent with our domestic priorities, preserving both a strong economy and a healthy environment. Accordingly, we the United States do not join those sections of the communiqué on climate and MDBs, reflecting our recent announcement to withdraw and immediately cease implementation of the Paris Agreement and associated financial commitment.

The United States and its G7 counterparts found common ground engaging in robust and constructive dialogue regarding other, equally important environmental issues. The United States joined consensus throughout the communiqué including the sections discussing resource efficiency, marine litter, and environmental policies and jobs.

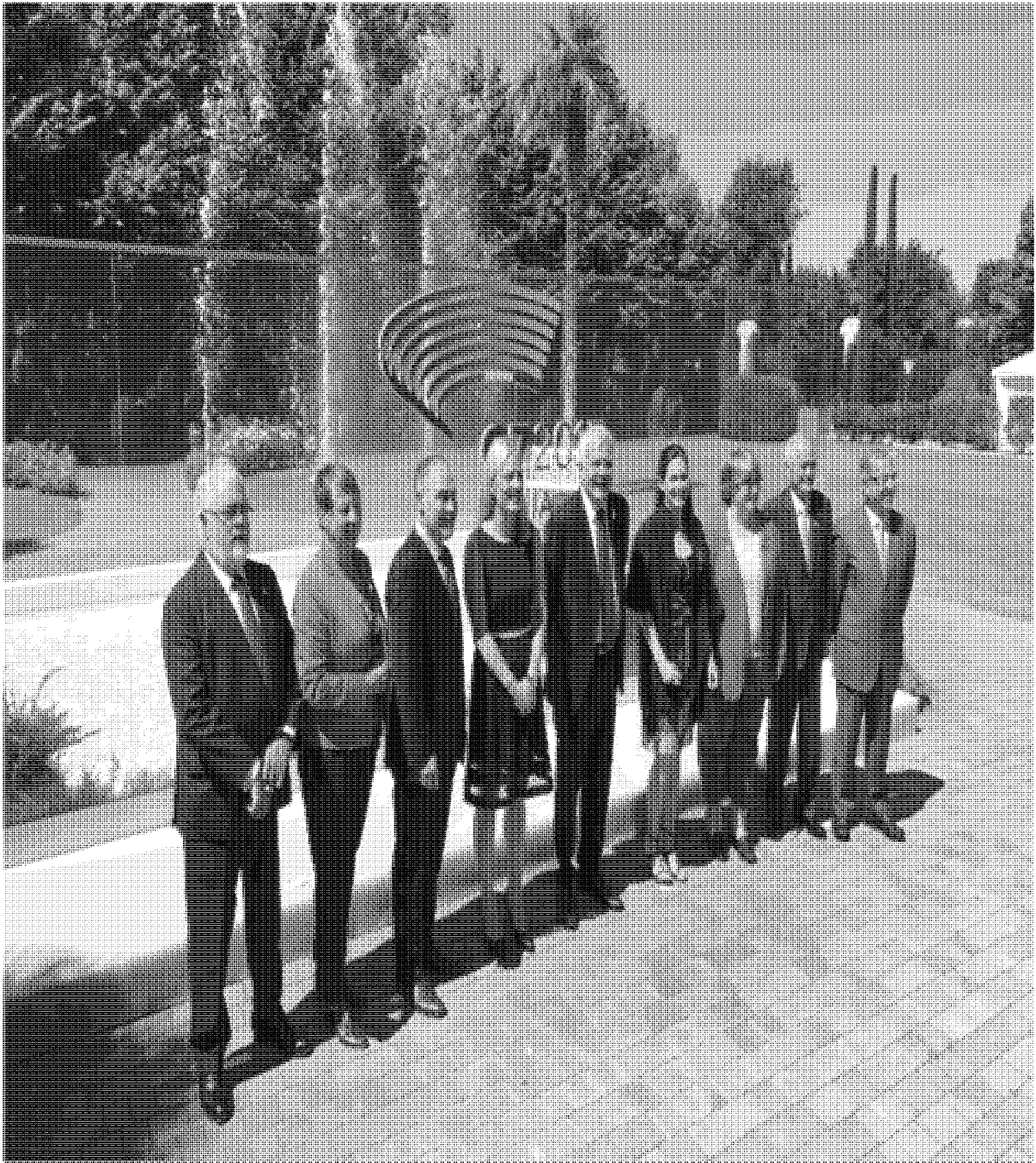
**“The United States will continue to show leadership by offering action-oriented solutions to the world's environmental challenges. We have indicated a willingness to engage on an international stage that stands to greatly benefit from American ingenuity, innovation, and advanced technologies. We have already demonstrated significant progress towards mitigating environmental problems and we will continue to develop these for the benefit of all nations,”** Administrator Pruitt said.



## BACKGROUND ...

### G7 Bologna Environment Ministers' Meeting's Press Release

“We, the G7 Environment Ministers and high representatives, and European Commissioners responsible for environment and climate, met in Bologna on 11-12 June 2017. We were joined by heads and senior officials of International Organizations and by representatives of universities and firms.” (G7 Bologna Environment Ministers' Meeting, Press Release, 06/12/17)



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Washington, D.C. 20004

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Message

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**From:** Konkus, John [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=555471B2BAA6419E8E141696F4577062-KONKUS, JOH]  
**Sent:** 6/6/2017 1:16:35 PM  
**To:** Wilcox, Jahan [wilcox.jahan@epa.gov]  
**Subject:** List

Joseph Bast, President Heartland Inst, JBast@heartland.org]  
Patrick Michaels, Ph.D., Cato Institute, pmichaels@cato.org  
Myron Ebell, Competitive Enterprise Institute, mebell@cei.org  
Kevin Dayaratna, Ph.D., Heritage Foundation, kevin.Dayaratna@heritage.org  
Ben Zycher, Ph.D., AEI, Benjamin.Zycher@AEI.org  
Tom Pyle, IER, tpyle@energydc.org  
Steve Milloy, Junkscience.org, Ex. 6 Personal Privacy (PP)

Message

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**From:** Konkus, John [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=555471B2BAA6419E8E141696F4577062-KONKUS, JOH]  
**Sent:** 6/5/2017 9:50:45 PM  
**To:** Joseph Bast [JBast@heartland.org]  
**Subject:** RE: EPA Scientific Integrity Stakeholder Meeting

Thank you.

---

**From:** Joseph Bast [mailto:JBast@heartland.org]  
**Sent:** Monday, June 5, 2017 5:48 PM  
**To:** Konkus, John <konkus.john@epa.gov>  
**Subject:** RE: EPA Scientific Integrity Stakeholder Meeting

Patrick Michaels, Ph.D., Cato Institute, [pmichaels@cato.org](mailto:pmichaels@cato.org)  
Myron Ebell, Competitive Enterprise Institute, [mebell@cei.org](mailto:mebell@cei.org)  
Kevin Dayaratna, Ph.D., Heritage Foundation, [kevin.Dayaratna@heritage.org](mailto:kevin.Dayaratna@heritage.org)  
Ben Zycher, Ph.D., AEI, [Benjamin.Zycher@AEI.org](mailto:Benjamin.Zycher@AEI.org)  
Tom Pyle, IER, [tpyle@energydc.org](mailto:tpyle@energydc.org)  
Steve Milloy, [Junkscience.org](http://Junkscience.org), Ex. 6 Personal Privacy (PP)

Joe

---

**From:** Konkus, John [mailto:[konkus.john@epa.gov](mailto:konkus.john@epa.gov)]  
**Sent:** Monday, June 05, 2017 4:41 PM  
**To:** Joseph Bast  
**Subject:** Re: EPA Scientific Integrity Stakeholder Meeting

Send me their I emails. They each represent a unique group so they should each get an invite. Thank you.

John Konkus  
Deputy Associate Administrator  
Office of Public Affairs  
Environmental Protection Agency  
Cell: Ex. 6 Personal Privacy (PP)

On Jun 5, 2017, at 5:25 PM, Joseph Bast <[JBast@heartland.org](mailto:JBast@heartland.org)> wrote:

Thanks!

One more question, can you or have you arranged for invitations to out to the following individuals? I could supply email addresses if you need them. I could invite them myself, but it would be nice if they were not "counted" against the number of others I end up bringing with me.

Patrick Michaels, Ph.D., Cato Institute  
Myron Ebell, CEI  
Kevin Dayaratna, Ph.D., Heritage Foundation  
Ben Zycher, Ph.D., AEI  
Tom Pyle, IER

Steve Milloy, [Junkscience.org](http://Junkscience.org)

Joe

---

**From:** Konkus, John [<mailto:konkus.john@epa.gov>]  
**Sent:** Monday, June 05, 2017 4:18 PM  
**To:** Joseph Bast  
**Subject:** RE: EPA Scientific Integrity Stakeholder Meeting

I have confirmed that tomorrow's meeting is an internal meeting. The meeting on the 14<sup>th</sup> is the public meeting.

Also, an organization is not limited to only one attendee. You should be able to bring others.

---

**From:** Joseph Bast [<mailto:JBast@heartland.org>]  
**Sent:** Monday, June 5, 2017 5:00 PM  
**To:** Konkus, John <[konkus.john@epa.gov](mailto:konkus.john@epa.gov)>  
**Subject:** FW: EPA Scientific Integrity Stakeholder Meeting

John,

This invitation doesn't say anything about my being able to invite guests. Can you please confirm that, before I start to invite others, or do you recommend I direct my inquiry to Martha Otto or Francesca Grifo?

Also, no mention of a meeting tomorrow, which I could call in for, and/or have some of Heartland's Washington DC staff attend in person.

Joe

---

**From:** Otto, Martha [<mailto:Otto.Martha@epa.gov>] **On Behalf Of** Scientific Integrity  
**Sent:** Monday, June 05, 2017 3:42 PM  
**Subject:** EPA Scientific Integrity Stakeholder Meeting

Greetings,

It is my pleasure to invite you to the U.S. Environmental Protection Agency's (EPA's) Scientific Integrity Annual Stakeholder Meeting. At this year's meeting, as the EPA Scientific Integrity Official, I will answer your questions, share current scientific integrity initiatives, and discuss future plans for scientific integrity at EPA. Please RSVP to [scientific\\_integrity@epa.gov](mailto:scientific_integrity@epa.gov) as soon as possible. Let us know if you plan to attend in person, by phone, or by AdobeConnect. Details are as follows:

**EPA Scientific Integrity Annual Stakeholder Meeting**  
**Wednesday, June 14<sup>th</sup>, 2017**  
**3:00-5:00 PM**  
**Ronald Reagan Building Mezzanine, Room 301 A-B**  
**RSVP Required:** [scientific\\_integrity@epa.gov](mailto:scientific_integrity@epa.gov)

**Audioconference No: 1-866-299-3188 code: 202-564-6811**

**AdobeConnect Link:** <http://epawebconferencing.acms.com/stakeholdermeeting/>

*\*To access this meeting, attendees must check in with security using a valid government-issued photo ID.  
All attendees should RSVP to facilitate their admittance to the building.*

I hope that you will join me to learn more about how we are ensuring a culture of scientific integrity at EPA.

Sincerely,

Francesca T. Grifo, Ph. D.  
Scientific Integrity Official  
US EPA Office of the Science Advisor  
202-564-1687  
<http://www.epa.gov/osa/basic-information-about-scientific-integrity>

Message

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**From:** Steve Milloy Ex. 6 Personal Privacy (PP)  
**Sent:** 6/13/2019 2:35:47 PM  
**To:** A-AND-R-DOCKET [A-AND-R-DOCKET@epa.gov]  
**CC:** Woods, Clint [woods.clint@epa.gov]  
**Subject:** EPA-HQ-OAR-2019-0316

I am nominating the following individuals for the PM2.5 peer review panel related to EPA-HQ-OAR-2019-0316-0001, "Request for Nominations: Scientific Peer Reviewers; Potential Approaches for Characterizing the Estimated Benefits of Reducing PM2.5 at Low Concentrations":

Dr. S. Stanley Young — current EPA SAB member  
Dr. Anthony Cox — current CASAC chairman  
Dr. Richard L. Smith — current SAB member  
Dr. James Enstrom — former UCLA epidemiologist.

All have published extensively on PM2.5 and are recognized experts on PM2.5.

Sincerely,

Steve Milloy  
Publisher, [JunkScience.com](http://JunkScience.com)



Message

---

**From:** Gordon, Stephen [gordon.stephen@epa.gov]  
**Sent:** 12/4/2018 3:56:04 PM  
**To:** Woods, Clint [woods.clint@epa.gov]  
**Subject:** Thursday Event  
**Attachments:** 111B Event.xlsx

Stephen L. Gordon Jr.  
Deputy Director for Public Engagement  
Office of the Administrator  
U.S. Environmental Protection Agency

**Ex. 6**

Gordon.Stephen@epa.gov

# RSVP List for 111B Event

Name	Company	Email
Taylor Rymiszewski	American Electric Power	<a href="mailto:TJRYMISZEWSKI@AEP.COM">TJRYMISZEWSKI@AEP.COM</a>
Tony Kavanagh	American Electric Power	<a href="mailto:APKAVANAGH@AEP.COM">APKAVANAGH@AEP.COM</a>
Marty McBroom	American Electric Power	<a href="mailto:mamcbroom@aep.com">mamcbroom@aep.com</a>
Daniel Fort		<b>Ex. 6</b>
Jim Hunter	Jim Hunter LLC	<a href="mailto:jim@jimhunterllc.com">jim@jimhunterllc.com</a>
Melissa Horton	Southern Company	<a href="mailto:MHIGGINS@southernco.com">MHIGGINS@southernco.com</a>
Fred Eames	Hunton & Williams	<a href="mailto:feames@hunton.com">feames@hunton.com</a>
Dan Byers	US Chamber of Commerce	<a href="mailto:dbyers@uschamber.com">dbyers@uschamber.com</a>
Heath Knakmuhs	US Chamber of Commerce	<a href="mailto:hknakmuhs@ushcamber.com">hknakmuhs@ushcamber.com</a>
Jake Tyner	US Chamber of Commerce	<a href="mailto:jtyner@uschamber.com">jtyner@uschamber.com</a>
Grover Norquist	Americans for Tax Reform	<a href="mailto:gnorquist@atr.org">gnorquist@atr.org</a>
Mike Palicz	Americans for Tax Reform	<a href="mailto:mpalicz@atr.org">mpalicz@atr.org</a>
Bonner Cohen	National Center for Public Policy Research	<b>Ex. 6</b>
Danny Gray	Charah Solutions, Inc.	<a href="mailto:DGray@charah.com">DGray@charah.com</a>
Thomas Adams	American Coal Ash Association	
Grant Kidwell	ALEC	<a href="mailto:gkidwell@alec.org">gkidwell@alec.org</a>
Harlan Watson		<b>Ex. 6</b>
Martin Rodriguez	Libre Initiative	<a href="mailto:mrodriguez@belibre.org">mrodriguez@belibre.org</a>
Becky Dunlop	Heritage	<a href="mailto:bndunlop@heritage.org">bndunlop@heritage.org</a>
Aaron Stover	The Heartland Institute	<a href="mailto:astover@heartland.org">astover@heartland.org</a>
Angela Logomasini	CEI	<a href="mailto:Angela.Logomasini@cei.org">Angela.Logomasini@cei.org</a>
Myron Ebell	CEI	<a href="mailto:Myron.ebell@cei.org">Myron.ebell@cei.org</a>
Rick Manning	Americans for Limitd Government	<a href="mailto:rmanning@getliberty.org">rmanning@getliberty.org</a>
Steve Milloy		<b>Ex. 6</b>
Jon Toomey	Fitzgerald Glider Kits	
Craig Richardson	E&E Legal	<a href="mailto:Richardson@eelegal.org">Richardson@eelegal.org</a>
Michelle Bloodworth	ACCCE	<a href="mailto:mbloodworth@americaspower.org">mbloodworth@americaspower.org</a>
Paul Bailey	ACCCE	<a href="mailto:pbailey@americaspower.org">pbailey@americaspower.org</a>
Joseph Stanko	Hunton & Williams	<a href="mailto:jstanko@hunton.com">jstanko@hunton.com</a>
Marc Morano		<a href="mailto:Morano@climatedepot.com">Morano@climatedepot.com</a>
Darren Bakst	Heritage	<a href="mailto:daren.bakst@heritage.org">daren.bakst@heritage.org</a>
Luncheon		
Darnell Sutton	Hollywall Inc.	<b>Ex. 6</b>
Carolyn Green	Proffessional Environmental Engineers	<a href="mailto:cgreen@pe-engrs.com">cgreen@pe-engrs.com</a>
Steve Nalefski	Burns & McDonnell	<a href="mailto:snalefski@burnsmcd.com">snalefski@burnsmcd.com</a>
Raynard Jackson	NBCC	<a href="mailto:raynard@bafbf.org">raynard@bafbf.org</a>

Harry Alford  
Kay DeBow  
Aaron Manaigo  
Jerry Jung  
Dirck Hargraves  
Quinn Fowler  
Damien Hammond  
Shaun Wiggins  
Daniel McMullen  
Shaun Garrison  
Maggie Harris  
Puneet Verma  
Jonathan Edwards  
Jerry Johnson  
Aaron Mercer

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Global Political Solutions  
  
Vox Global  
The Eymit Group  
Windjammer Environmental LLC  
Soteryx Corporation  
Soteryx Corporation  
Ameren  
ESC, Inc.  
Chevron  
Blue Canopy Group, LLC  
National Religious Broadcasters  
National Religious Broadcasters

[halford@nationalbcc.org](mailto:halford@nationalbcc.org)  
[kdebow@nationalbcc.org](mailto:kdebow@nationalbcc.org)  
[amanaigo@globalpoliticalsolutions.com](mailto:amanaigo@globalpoliticalsolutions.com)

## Ex. 6

[quinn@eymitgroup.com](mailto:quinn@eymitgroup.com)  
[hammond@wjenviro.com](mailto:hammond@wjenviro.com)  
[shaun.wiggins@soteryx.com](mailto:shaun.wiggins@soteryx.com)  
[daniel.mcmullen@soteryx.com](mailto:daniel.mcmullen@soteryx.com)  
[SGarrison@ameren.com](mailto:SGarrison@ameren.com)  
[harris\\_maggie@escinc1.com](mailto:harris_maggie@escinc1.com)  
[PVerma@chevron.com](mailto:PVerma@chevron.com)  
[JEdwards@bluecanopy.com](mailto:JEdwards@bluecanopy.com)  
[jjohnson@nrb.org](mailto:jjohnson@nrb.org)  
[amercer@nrg.org](mailto:amercer@nrg.org)

Message

---

**From:** Rappold, Ana [Rappold.Ana@epa.gov]  
**Sent:** 10/11/2018 12:45:21 PM  
**To:** Pat Young [genetree@bellsouth.net]  
**CC:** Smith, Richard L [rls@email.unc.edu]; Julie Goodman [JGoodman@gradientcorp.com]; Woods, Clint [woods.clint@epa.gov]  
**Subject:** Re: causality workshop

Sorry for delay I am away from the office. I see that Richard has already answered your questions.

Best wishes

Ana

Sent from my iPhone

On Oct 10, 2018, at 6:52 PM, Pat Young <genetree@bellsouth.net> wrote:

Richard:

Lots of random thoughts, in no particular order.

1. The director of CDC in one of the stat publications said he **really, really, really** wanted to make data more accessible. I sent him a note and basically got nowhere. At this point is is all talk from CDC.
2. I did send a note to Julie and she more or less said impossible.
3. For any of these talks to have impact with EPA (transparency), the data has to be public.
4. I keep coming back to micro aggregation and protection of personal identity. Obviously, so far Quixotic.
5. I have your talk and the talk of Tony Cox. To make sense of talks it is helpful to have the slides and think about what is said.

Again, I reviewed your slides and I found them persuasive. It makes a lot of sense for the data to be public, for what little that means.

Stan

On 10/10/2018 6:23 PM, Smith, Richard L wrote:

Stan,

Thanks for cc'ing me on your email to Ana but I think some of your queries may be misdirected –

1. I'm confident all the folks at EPA know about our CA paper. Doesn't make their job any easier...

2. About making the talks public, I suggest you contact Julie. Gradient were the organizers of the conference, not EPA. I have no objection to my own talk being public but they would still have to ask my permission and nobody's done that.
3. I believe you're already familiar with the issue of data confidentiality in this case. The data are owned by CMS (Medicare) and they only let it out after negotiating complicated licensing agreements. As Julie explained in her opening talk last week, it took several months for them to release the data (and a lot of money – I don't know how much but I've been assured it wasn't a trivial sum). Then, the conditions for its use – the data are stored on a remote server at Indiana University and none of us researchers can download it. To run my fortran programs as I said I was doing at one point, I wrote the program on my own machine, uploaded it to IU, and ran it remotely. Every time I had to correct the program, I make the corrections on my own machine, uploaded the program again, and recompiled it at IU. Slow process. These are not Gradient's rules (and they are nothing at all to do with EPA) but they are rules imposed by CMS as a condition for using the data. At least I don't have to go to a secure room like those people we were talking to in RTI. So although it's TRUE that personal identity was protected (the smallest unit of spatial resolution was county), they still impose these rules. I don't know what can be done about that.

Richard

---

**From:** StanYoung <[genetree@bellsouth.net](mailto:genetree@bellsouth.net)>

**Sent:** Wednesday, October 10, 2018 5:13 PM

**To:** [Rappold.ana@Epa.gov](mailto:Rappold.ana@Epa.gov)

**Cc:** Smith, Richard L <[rls@email.unc.edu](mailto:rls@email.unc.edu)>

**Subject:** causality workshop

Dear Ana Rappold:

I enjoyed day one of the causality workshop. Too bad I missed the 2<sup>nd</sup> day. I heard that the discussion was good.

During the 1st day discussion, I noted that we found no association of PM2.5 or ozone on all-cause, cardiovascular, or respiratory deaths in California. I attach a paper where Richard Smith was a co-author. I also point to a list of some negative studies I have come across\*\*.

Two more things:

Are the slides for the talks going to be place on a web site?

Can the data sets used by the three speakers be made public? I know there is always concern about personal identity. My impression is that data was aggregated so that personal identity is protected.

Stan Young

\*\*

<https://junkscience.com/2018/06/negative-studies-and-pm2-5/#more-93941>

Message

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**From:** Gordon, Stephen [gordon.stephen@epa.gov]  
**Sent:** 4/11/2018 9:33:00 PM  
**To:** Woods, Clint [woods.clint@epa.gov]  
**Subject:** Conservative List  
**Attachments:** Conservative Contact List .xlsx

Stephen L. Gordon Jr.  
Deputy Director for Public Engagement  
Office of the Administrator  
U.S. Environmental Protection Agency  
(202) 564-1301  
Gordon.Stephen@epa.gov

## Conservative Contacts

Affiliation	Contact Name	Position	Email Address
Americans for Tax Reform	Grover Norquist	President	gnorquist@atr.org
Capital Research Center	Steven Allen		sallen@capitalresearch.org
Capitol Research Center	Scott Walter		SW@Capitalresearch.org
CATO Institute	Peter Goettler		pgoettler@cato.org
CATO Institute	Patrick Michaels		pmichaels@cato.org
CEI	Angela Logomasini		angela.logomasini@cei.org
Citizens Against Government Waste	Tom Schatz	President	tschatz@cagw.org
Committee for a Constructive Tomorrow	Marc Morano		Ex. 6
Committee for a Constructive Tomorrow	Craig Rucker		craig@cfact.org
Competitive Enterprise Institute	Myron Ebell		mebell@cei.org
Competitive Enterprise Institute	Chris Horner		Christopher.Horner@cei.org
Competitive Enterprise Institute	Sam Kazman		skazman@CEI.org
Competitive Enterprise Institute	Marlo Lewis		MLewis@cei.org
Competitive Enterprise Institute	William Yeatman		william.yeatman@cei.org
Competitive Enterprise Institute	Kent Lassman	President	kent.lassman@cei.org
Cornwall Alliance	Mariam Bell		Ex. 6
Daily Signal	Kevin Mooney		
Energy & Environment Legal Institute	Craig Richardson		richardson@eelegal.org
EPA Transition Team	Harlan Watson		Ex. 6
Fmr EPA	Dan Forte		Ex. 6
Fmr NC DEP	Don Van Der Vaart		vd.vaat@att.net
FreedomWorks	Adam Brandon	President	abrandon@freedomworks.org
George Allen Strategies	Sandy Bourne		sbourne@georgeallen.com
Heartland Institute	Bonner Cohen		bonnercohen@comcast.net
Heartland Institute	Tim Huelskamp	President	THuelskamp@heartland.org
Independent Women's Forum	Julie Gunlock		julie.gunlock@iwf.org
Institute for Energy Research	Tom Pyle		tpyle@ierdc.org
Institute for Energy Research	Tom Pyle	President	tpyle@energydc.org
Junkscience.com	Steve Milloy		Ex. 6



National Religious Broadcasters	Jerry Johnson		jjohnson@nrb.org
Natural Resources Group, LLC	Greg Walcher		Ex. 6
Pacific Legal Foundation	Todd Gaziano		tgaziano@pacificlegal.org
Pacific Legal Foundation	Jonathan Wood		jw@pacificlegal.org
President of Americans for Prosperity	Tim Phillips	President	tphillips@afphq.org
Reason Foundation	Brian Seasholes		brian.seasholes@reason.org
The Heritage Foundation	Daren Bakst		daren.bakst@heritage.org
The Heritage Foundation	Mike Costigan		michael.costigan@heritage.org
The Heritage Foundation	Rob Gordon		robert.gordon@heritage.org
The Heritage Foundation	Diane Katz		diane.katz@heritage.org
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The Heritage Foundation	Jack Spencer		jack.spencer@heritage.org
The Heritage Foundation	Katie Tubb		katie.tubb@heritage.org
The Heritage Foundation	Robert Bluey		robert.bluey@heritage.org
			Ex. 6
The Heritage Foundation	Ed Feulner	President	Lauren.Bowman@heritage.org

Message

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**From:** Gordon, Stephen [gordon.stephen@epa.gov]  
**Sent:** 4/20/2018 2:26:46 PM  
**To:** Yamada, Richard (Yujiro) [yamada.richard@epa.gov]; Woods, Clint [woods.clint@epa.gov]  
**CC:** Letendre, Daisy [letendre.daisy@epa.gov]  
**Subject:** RSVP List  
**Attachments:** Science Transparency RSVP.xlsx

The RSVP List as of right now is attached.

I just sent out another reminder email to the original invitee list.

Stephen L. Gordon Jr.  
Deputy Director for Public Engagement  
Office of the Administrator  
U.S. Environmental Protection Agency  
(202) 564-1301  
Gordon.Stephen@epa.gov

Science Transparency RSVP

<b>Name</b>	<b>Title</b>	<b>Company</b>
Keith Appell	Senior Vice President	CRC Public Relations
Steve Milloy		
Chuck Cunningham	Senior Vice President	Securing America's Future Energy
Jake Tyner	Manager	US Chamber
Craig Rucker	Executive Director	CFACT
Marc Morano		
Adam Houser		CFACT
Rob Bluey		Heritage
Ed Thomas		Fertilizer Institute
Patrick Hedger		Freedom Works
Michael McKenna		
Angela Logomasini	Senior Fellow	CEI
Nick Goldstein	Vice President	American Road and Transportation Builders
Kevin Koonce		Vinyl Institute
Taylor Barkley	Director	CEI
Harper Lanier		CEI
Barb Glenn	CEO	NASDA
Todd Graziano	Director	Pacific Legal Foundation
Jennifer Gibson	Vice President	National Association of Chemical Distributors
Kent Lassman		CEI
Dan Byers		US Chamber
Aaron Stover	Director	The Heartland Institute
Harlan Watson		
Myron Ebell		CEI
Bonner Cohen		Heartland Institute
Robert Gordon		Heritage
Bryce Chinault		George Washington Regulatory Studies Center
Susan Dudley		George Washington Regulatory Studies Center
Richard Belzer		

## Email

[kappell@CRCPublicRelations.com](mailto:kappell@CRCPublicRelations.com)

### Ex. 6 Personal Privacy (PP)

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[crucker@cfact.org](mailto:crucker@cfact.org)

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[phedger@freedomworks.org](mailto:phedger@freedomworks.org)

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[astover@heartland.org](mailto:astover@heartland.org)

### Ex. 6 Personal Privacy (PP)

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### Ex. 6 Personal Privacy (PP)

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[susandudley@email.gwu.edu](mailto:susandudley@email.gwu.edu)

[rbbelzer@post.harvard.edu](mailto:rbbelzer@post.harvard.edu)

Message

---

**From:** James E. Enstrom [jenstrom@ucla.edu]  
**Sent:** 2/1/2018 4:47:50 PM  
**To:** Woods, Clint [woods.clint@epa.gov]  
**Subject:** Harvard Conspires Against USA via TH Chan PM2.5 Corruption

FYI---Harvard Conspires Against USA via TH Chan PM2.5 Corruption. NO response from any of the JAMA authors—all foreigners, mostly Chinese.

---

**From:** James E. Enstrom [mailto:jenstrom@ucla.edu]  
**Sent:** Wednesday, December 27, 2017 11:16 AM  
**To:** 'Joel D. Schwartz' <jschwartz@hsph.harvard.edu>  
**Cc:** 'Junfang Zhang' <junfeng.zhang@duke.edu>; 'Qian Di' <qid335@mail.harvard.edu>; 'Lingzhen Dai' <lidai@hsph.harvard.edu>; 'Yun Wang' <wangyun@hsph.harvard.edu>; 'Francesca Dominici' <fdominic@hsph.harvard.edu>; 'Antonella Zanobetti' <azanobet@hsph.harvard.edu>; 'Christine Choirat' <Ex. 6>; 'Petros Koutrakis' <petros@hsph.harvard.edu>; 'Yan Wang' <yaw719@mail.harvard.edu>  
**Subject:** Scientific War Against Corrupt Air Pollution Epidemiology

December 27, 2017

Joel D. Schwartz (China) <jschwartz@hsph.harvard.edu>  
Junfang Zhang (China) <junfeng.zhang@duke.edu>  
Qian Di (China) <qid335@mail.harvard.edu>  
Lingzhen Dai (China) <lidai@hsph.harvard.edu>  
Yun Wang (China) <wangyun@hsph.harvard.edu>  
Yan Wang (China) <yaw719@mail.harvard.edu>  
Francesca Dominici (Italy) <fdominic@hsph.harvard.edu>  
Antonella Zanobetti (Italy) <azanobet@hsph.harvard.edu>  
Christine Choirat (France) <Ex. 6>  
Petros Koutrakis (Greece) <petros@hsph.harvard.edu>

Re: Scientific War Against Corrupt Air Pollution Epidemiology

Dear TH Chan (China) U School of Public Health Investigators,

I want you to know that a scientific war has been declared against corrupt air pollution epidemiology in the United States, such as, your December 26, 2017 JAMA article "Association of Short-term Exposure to Air Pollution With Mortality in Older Adults." Your article and editorial disgrace honest epidemiology and honest science, as explained in the detailed December 26, 2017 JunkScience.com "TH Chan U PM2.5 Perpetual Junk Science Machine Strikes Again" (<https://junkscience.com/2017/12/harvards-pm2-5-perpetual-junk-science-machine-strikes-again/#more-92887>).

Furthermore, your article and editorial are Anti-American because your goal is to prop up scientifically unjustified USEPA-CARB-SCAQMD air pollution regulations that hurt American Citizens. You are simply foreign 'scientists' promoting air pollution regulations in the United States that are needed in your own countries. All

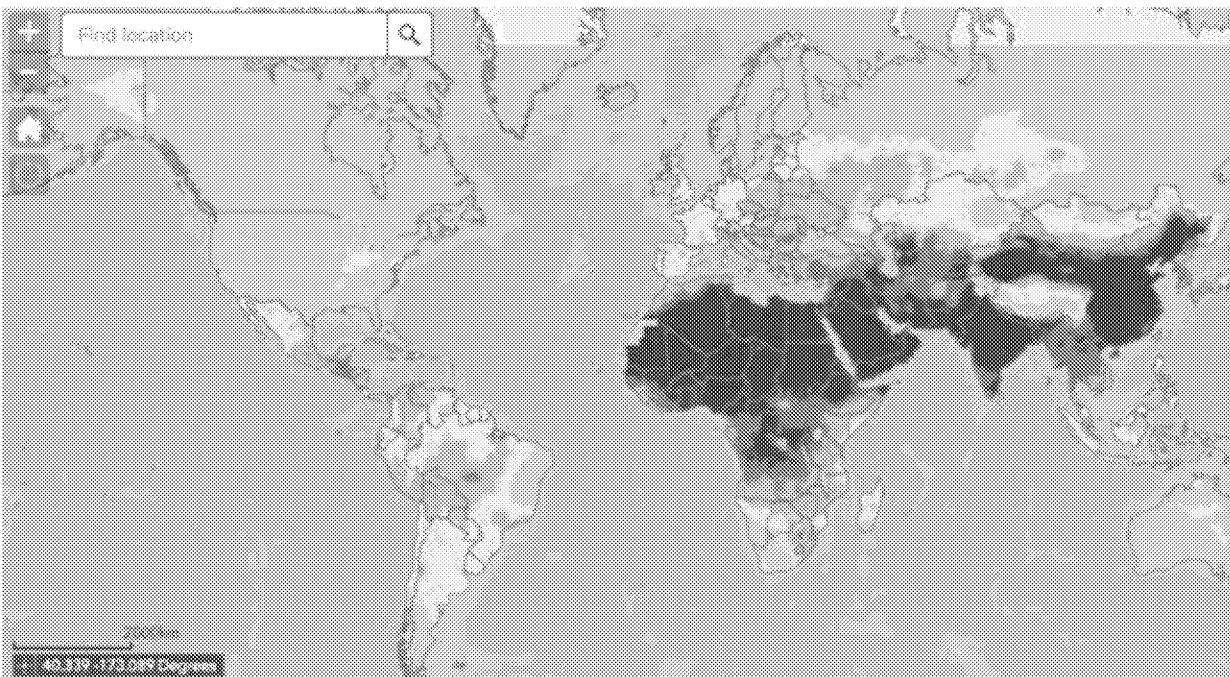
of you know that the current air pollution problem is in China, India, Africa, and Europe, not in the United States (see map below). Our growing army of honest scientists is going to stop NIH, EPA, and HEI from funding your pseudoscience (<http://www.foxnews.com/politics/2017/12/26/junk-science-studies-behind-obama-regulations-under-fire.html>).

Sincerely yours,

James E. Enstrom, PhD, MPH, FFACE  
<http://americafirstenergy.org/>

World Health Organization Map: 2015 Global Annual Mean Ambient PM<sub>2.5</sub> (µg/m<sup>3</sup>)

*Source: World Health Organization*





Message

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**From:** Abboud, Michael [abboud.michael@epa.gov]  
**Sent:** 1/25/2018 9:16:08 PM  
**To:** Woods, Clint [woods.clint@epa.gov]  
**Subject:** Re: project

This is awesome thank you so much! Have fun in Austin.

Sent from my iPhone

On Jan 25, 2018, at 4:14 PM, Woods, Clint <woods.clint@epa.gov> wrote:

Steve Hayward @ Powerline [Ex. 6]  
Mike Bastasch @ Daily Caller (mike@dailycallernewsfoundation.org)  
Willie Yeatman @ CEI (wyeatman@cei.org)  
Dan Byers @ Chamber Global Energy Inst (DByers@USChamber.com)  
Chip Knappenberger @ Cato (cknappenberger@cato.org)  
Ron Bailey @ Reason (rbailey@reason.com)  
Oren Cass @ Manhattan Inst [Ex. 6]  
Steve Milloy @ Junk Science [Ex. 6]  
Nick Loris @ Heritage (nloris@heritage.org)  
Ron Arnold @ Ctr for Defense of Free Enterprise [Ex. 6]

---

**From:** Abboud, Michael  
**Sent:** Thursday, January 25, 2018 3:14 PM  
**To:** Woods, Clint <woods.clint@epa.gov>  
**Subject:** FW: project

Hey do you have any ideas off the top of your head who you may have worked with previously? No worries if not just wanted to check thanks!

---

**From:** Bowman, Liz  
**Sent:** Thursday, January 25, 2018 3:03 PM  
**To:** Hewitt, James <hewitt.james@epa.gov>; Abboud, Michael <abboud.michael@epa.gov>; Daniell, Kelsi <daniell.kelsi@epa.gov>; Block, Molly <block.molly@epa.gov>  
**Subject:** project

Can y'all find the top conservative writers/bloggers, etc. at each stakeholder group that cover Air issues? I have something to send them shortly...and need y'all's help on getting the word out

Liz Bowman  
U.S. Environmental Protection Agency (EPA)  
Office: 202-564-3293



Message

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**From:** Hubbard, Carolyn [Hubbard.Carolyn@epa.gov]  
**Sent:** 9/13/2017 8:51:30 PM  
**To:** Nelson, Daniel K. [Nelson.Daniel@epa.gov]  
**CC:** Cascio, Wayne [Cascio.Wayne@epa.gov]; Diaz-Sanchez, David [Diaz-Sanchez.David@epa.gov]; Yamada, Richard (Yujiro) [yamada.richard@epa.gov]; Benson, William [Benson.William@epa.gov]; Rodan, Bruce [rodan.bruce@epa.gov]; Kavlock, Robert [Kavlock.Robert@epa.gov]; Sinks, Tom [Sinks.Tom@epa.gov]  
**Subject:** RE: RESPONSE ATTACHED RE: Human testing article

Yes, Wayne sent that to me yesterday. Thank you!

Carolyn Hubbard  
Communications Director  
EPA Office of Research and Development  
202-564-2189

**Ex. 6**

---

**From:** Nelson, Daniel K.  
**Sent:** Wednesday, September 13, 2017 4:50 PM  
**To:** Hubbard, Carolyn <Hubbard.Carolyn@epa.gov>  
**Cc:** Cascio, Wayne <Cascio.Wayne@epa.gov>; Diaz-Sanchez, David <Diaz-Sanchez.David@epa.gov>; Yamada, Richard (Yujiro) <yamada.richard@epa.gov>; Benson, William <Benson.William@epa.gov>; Rodan, Bruce <rodan.bruce@epa.gov>; Kavlock, Robert <Kavlock.Robert@epa.gov>; Sinks, Tom <Sinks.Tom@epa.gov>  
**Subject:** RE: RESPONSE ATTACHED RE: Human testing article

P.S. I am assuming you have the original inquiry from Daily Caller to David Diaz-Sanchez, to which this responds, but please let us know if not.

---

**From:** Hubbard, Carolyn  
**Sent:** Wednesday, September 13, 2017 4:48 PM  
**To:** Nelson, Daniel K. <Nelson.Daniel@epa.gov>  
**Cc:** Cascio, Wayne <Cascio.Wayne@epa.gov>; Diaz-Sanchez, David <Diaz-Sanchez.David@epa.gov>; Yamada, Richard (Yujiro) <yamada.richard@epa.gov>; Benson, William <Benson.William@epa.gov>; Rodan, Bruce <rodan.bruce@epa.gov>; Kavlock, Robert <Kavlock.Robert@epa.gov>; Sinks, Tom <Sinks.Tom@epa.gov>  
**Subject:** RE: RESPONSE ATTACHED RE: Human testing article

Thanks Dan, yes we can work with OPA on this. Thank you!

Carolyn Hubbard  
Communications Director  
EPA Office of Research and Development  
202-564-2189

**Ex. 6**

---

**From:** Nelson, Daniel K.  
**Sent:** Wednesday, September 13, 2017 4:25 PM  
**To:** Hubbard, Carolyn <Hubbard.Carolyn@epa.gov>  
**Cc:** Cascio, Wayne <Cascio.Wayne@epa.gov>; Diaz-Sanchez, David <Diaz-Sanchez.David@epa.gov>; Yamada, Richard (Yujiro) <yamada.richard@epa.gov>; Benson, William <Benson.William@epa.gov>; Rodan, Bruce <rodan.bruce@epa.gov>; Kavlock, Robert <Kavlock.Robert@epa.gov>; Sinks, Tom <Sinks.Tom@epa.gov>  
**Subject:** RESPONSE ATTACHED RE: Human testing article

Carolyn,

As Wayne Cascio communicated, we have drafted a response to the Daily Caller inquiry, stemming from Steve Milloy's latest post about one of our NHEERL studies. Please see attached.

## Ex. 5 Deliberative Process (DP)

Please let me know if any questions, or further info needed. To confirm, it is our understanding that you (or appropriate press office staff) would correspond directly with the reporter from Daily Caller, and we have not.

Dan

~~~~~  
Daniel Nelson, Director  
Human Research Protocol Office (HRPO)  
National Health and Environmental Effects Research Laboratory (NHEERL)  
U.S. Environmental Protection Agency (EPA)  
[Nelson.Daniel@epa.gov](mailto:Nelson.Daniel@epa.gov)

---

**From:** Sinks, Tom  
**Sent:** Wednesday, September 13, 2017 1:38 PM  
**To:** Yamada, Richard (Yujiro) <[yamada.richard@epa.gov](mailto:yamada.richard@epa.gov)>  
**Cc:** Benson, William <[Benson.William@epa.gov](mailto:Benson.William@epa.gov)>; Cascio, Wayne <[Cascio.Wayne@epa.gov](mailto:Cascio.Wayne@epa.gov)>; Hubbard, Carolyn <[Hubbard.Carolyn@epa.gov](mailto:Hubbard.Carolyn@epa.gov)>; Rodan, Bruce <[rodan.bruce@epa.gov](mailto:rodan.bruce@epa.gov)>; Kavlock, Robert <[Kavlock.Robert@epa.gov](mailto:Kavlock.Robert@epa.gov)>; Sinks, Tom <[Sinks.Tom@epa.gov](mailto:Sinks.Tom@epa.gov)>  
**Subject:** RE: Human testing article

Thanks for sharing Richard.

Ex. 5 Deliberative Process (DP)

## Ex. 5 Deliberative Process (DP)

TROPICOZ is a controlled exposure study conducted by EPA. Information about the study is located on Clinical Trials.gov at <https://clinicaltrials.gov/ct2/show/NCT01981135>

I am ccing Wayne Cascio because his group would have done the work. Wayne can you provide Richard with the facts re this article?

Also Carolyn Hubbard in case OC already has some information to share with you.

Also ccing Bill Benson, Bruce and Bob a an FYI. .

I will also check some OSA records just in case.

---

**From:** Yamada, Richard (Yujiro)  
**Sent:** Wednesday, September 13, 2017 1:10 PM  
**To:** Sinks, Tom <[Sinks.Tom@epa.gov](mailto:Sinks.Tom@epa.gov)>  
**Subject:** Human testing article

Thanks Tom

<http://dailycaller.com/2017/09/12/epa-accused-of-burying-scientific-evidence-from-human-testing-that-contradicted-obamas-agenda/>

Sent from my iPhone

**From:** Zarba, Christopher [Zarba.Christopher@epa.gov]  
**Sent:** 7/18/2017 2:00:13 PM  
**To:** Yamada, Richard (Yujiro) [yamada.richard@epa.gov]  
**Subject:** FW: WSJ - A Step Toward Scientific Integrity at the EPA

Here is the article. There are a number of inaccuracies....

- [Opinion](#)
- [Commentary](#)

## A Step Toward Scientific Integrity at the EPA

**Scott Pruitt sweeps out Obama-era science advisers. The agency needs truly independent ones.**

By  
Steve Milloy  
July 17, 2017 5:14 p.m. ET  
[198 COMMENTS](#)

The Trump administration in May began the process of replacing the small army of outside science advisers at the Environmental Protection Agency. In June, 38 additional EPA advisers were notified that their appointments would not be renewed in August. To Mr. Trump's critics, this is another manifestation of his administration's "war on science." Histrionics aside, the administration's actions are long overdue.

The most prominent of the EPA's myriad boards of outside advisers are the Science Advisory Board and the Clean Air Scientific Advisory Committee, or CASAC. Mostly made up of university professors, these boards also frequently draw members from consulting firms and activist groups. Only rarely do members have backgrounds in industry. All EPA boards are governed by the Federal Advisory Committee Act, which requires that they be balanced and unbiased. While the EPA is required by law to convene the SAB and CASAC, the agency is not bound by law to heed their advice.

The EPA's Obama-era "war on coal" rules and its standards for ground-level ozone—possibly the [most expensive](#) EPA rule ever issued—depend on the same scientifically unsupported notion that the fine particles of soot emitted by smokestacks and tailpipes are lethal. The EPA claims that such particles kill hundreds of thousands of Americans annually.

The EPA first considered regulating fine particles in the mid-1990s. But when the agency [ran its claims](#) past CASAC in 1996, the board concluded that the scientific evidence did not support the agency's regulatory conclusion. Ignoring the panel's advice, the EPA's leadership chose to regulate fine particles anyway, and resolved to figure out a way to avoid future troublesome opposition from CASAC.

In 1996 two-thirds of the CASAC panel had no financial connection to the EPA. By the mid-2000s, the agency had entirely flipped the composition of the advisory board so two-thirds of its members were agency grantees. Lo and behold, CASAC suddenly agreed with the EPA's leadership that fine particulates in outdoor air kill.

During the Obama years, the EPA packed the CASAC panel. Twenty-four of its 26 members are now agency grantees, with some listed as principal investigators on EPA research grants worth more than \$220 million.

Although the scientific case against particulate matter hasn't improved since the 1990s, the EPA has tightened its grip on CASAC. In effect, EPA-funded researchers are empowered to review and approve their own work in order to rubber-stamp the EPA's regulatory agenda. This is all done under the guise of "independence."

Another "independent" CASAC committee conducted the most recent review of the Obama EPA's ground-level ozone standards. Of that panel's 20 members, 70% were EPA grantees who'd hailed in more than \$192 million from the agency over the years. These EPA panels make decisions by consensus, which has lately been easy enough to achieve considering they are usually chaired by an EPA grantee.

Would-be reformers have so far had no luck changing the culture at these EPA advisory committees. In 2016 the Energy and Environment Legal Institute, where I am a senior fellow, sued the agency. We alleged that the CASAC fine-particulate subcommittee was biased—a clear violation of the Federal Advisory Committee Act. We found a plaintiff who had been refused CASAC membership because of his beliefs about fine particles. Unfortunately, that individual was not willing to take a hostile public stand against the EPA for fear of professional retribution. We ultimately withdrew the suit.

The EPA's opaque selection process for membership on its advisory boards has opened the agency to charges of bias. In 2016 Michael Honeycutt, chief toxicologist of the Texas Commission on Environmental Quality, was recommended in 60 of the 83 nominations to the EPA for CASAC membership. The EPA instead selected Donna Kenski of the Lake Michigan Air Directors Consortium. Ms. Kenski received only one of the 83 recommendations. While no one objected to Mr. Honeycutt's nomination, Sen. James Inhofe (R., Okla.) lodged an objection to Ms. Kenski's nomination, claiming she had exhibited partisanship during an earlier term on the committee.

Congress has also tried to reform the EPA's science advisory process. During the three most recent Congresses, the House has passed bills to provide explicit conflict-of-interest rules for EPA science advisers, including bans on receiving EPA grants for three years before and after service on an advisory panel. The bills went nowhere in the Senate, where the threat of a Democrat-led filibuster loomed. Had they passed, President Obama surely would have vetoed them.

President Trump and his EPA administrator have ample statutory authority to rectify the problem. As Oklahoma's attorney general, Scott Pruitt spent years familiarizing himself with the EPA's unlawful ways. He is in the process of reaffirming the independence of the agency's science advisory committees. This won't mean that committee members can't have a point of view. But a committee as a whole must be balanced and unbiased. Mr. Pruitt's goal is the one intended by Congress—peer review, not pal review.

*Mr. Milloy served on the Trump EPA transition team and is the author of "Scare Pollution: Why and How to Fix the EPA."*

Appeared in the July 18, 2017, print edition.

Message

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**From:** Cascio, Wayne [Cascio.Wayne@epa.gov]  
**Sent:** 9/13/2017 8:06:51 PM  
**To:** Sinks, Tom [Sinks.Tom@epa.gov]; Yamada, Richard (Yujiro) [yamada.richard@epa.gov]  
**CC:** Benson, William [Benson.William@epa.gov]; Hubbard, Carolyn [Hubbard.Carolyn@epa.gov]; Rodan, Bruce [rodan.bruce@epa.gov]; Kavlock, Robert [Kavlock.Robert@epa.gov]  
**Subject:** Re: Human testing article

We will. Ex. 5 Deliberative Process (DP) Wayne

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**From:** Sinks, Tom  
**Sent:** Wednesday, September 13, 2017 4:02 PM  
**To:** Cascio, Wayne; Yamada, Richard (Yujiro)  
**Cc:** Benson, William; Hubbard, Carolyn; Rodan, Bruce; Kavlock, Robert  
**Subject:** RE: Human testing article

Thanks Wayne – if this is typical of our listings in clinicaltrials.gov maybe we should do the same with the others.

---

**From:** Cascio, Wayne  
**Sent:** Wednesday, September 13, 2017 4:00 PM  
**To:** Sinks, Tom <Sinks.Tom@epa.gov>; Yamada, Richard (Yujiro) <yamada.richard@epa.gov>  
**Cc:** Benson, William <Benson.William@epa.gov>; Hubbard, Carolyn <Hubbard.Carolyn@epa.gov>; Rodan, Bruce <rodan.bruce@epa.gov>; Kavlock, Robert <Kavlock.Robert@epa.gov>  
**Subject:** Re: Human testing article

Tom - When David returns from NIH Study Section if technically possible he will up-load the pdf of the Kahle EHP 2017 paper on ClinicalTrials.com. Wayne

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**From:** Sinks, Tom  
**Sent:** Wednesday, September 13, 2017 3:36 PM  
**To:** Cascio, Wayne; Yamada, Richard (Yujiro)  
**Cc:** Benson, William; Hubbard, Carolyn; Rodan, Bruce; Kavlock, Robert  
**Subject:** RE: Human testing article

Thanks Wayne – this is typical of SM. Ex. 5 Deliberative Process (DP)  
Ex. 5 Deliberative Process (DP)

I did travel to Clinicaltrials.gov and noticed that we did not post the study findings or provide a link to the EHP article on that site. Is this something we should go ahead and do?

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**From:** Cascio, Wayne  
**Sent:** Wednesday, September 13, 2017 2:24 PM  
**To:** Sinks, Tom <Sinks.Tom@epa.gov>; Yamada, Richard (Yujiro) <yamada.richard@epa.gov>  
**Cc:** Benson, William <Benson.William@epa.gov>; Hubbard, Carolyn <Hubbard.Carolyn@epa.gov>; Rodan, Bruce <rodan.bruce@epa.gov>; Kavlock, Robert <Kavlock.Robert@epa.gov>  
**Subject:** Re: Human testing article

Richard and Tom - The purpose of this email is to provide context to the blog by S.M. that appeared on JunkScience.com yesterday regarding David Diaz-Sanchez's clinical research study titled TROPICOZ which was designed to investigate the interaction between ambient temperature and ozone on biochemical and physiological responses in human research volunteers. The study was published in Environmental Health Perspectives (April 2015 – pdf attached).

## Ex. 5 Deliberative Process (DP)

I hope you find this information useful.

Ex. 5 Deliberative Process (DP)

## Ex. 5 Deliberative Process (DP)

Please let us know if we provide any further information.

Wayne Cascio

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**From:** Sinks, Tom

**Sent:** Wednesday, September 13, 2017 1:37 PM

**To:** Yamada, Richard (Yujiro)

**Cc:** Benson, William; Cascio, Wayne; Hubbard, Carolyn; Rodan, Bruce; Kavlock, Robert; Sinks, Tom

**Subject:** RE: Human testing article

Thanks for sharing Richard. Steve Milloy has been persistent at attacking EPAs controlled exposure studies as unethical.

Ex. 5 Deliberative Process (DP)

## Ex. 5 Deliberative Process (DP)

TROPICOZ is a controlled exposure study conducted by EPA. Information about the study is located on Clinical Trials.gov at <https://clinicaltrials.gov/ct2/show/NCT01981135>

Interaction Effects of Temperature and Ozone - Full Text ...

clinicaltrials.gov

Purpose: The purpose of this protocol is to understand how individuals respond to the air pollutant ozone at elevated temperatures. Ultimately, this will help us ...

I am ccing Wayne Cascio because his group would have done the work. Wayne can you provide Richard with the facts re this article?

Also Carolyn Hubbard in case OC already has some information to share with you.

Also ccing Bill Benson, Bruce and Bob a an FYI. .

I will also check some OSA records just in case.

---

**From:** Yamada, Richard (Yujiro)

**Sent:** Wednesday, September 13, 2017 1:10 PM

**To:** Sinks, Tom <[Sinks.Tom@epa.gov](mailto:Sinks.Tom@epa.gov)>

**Subject:** Human testing article

Thanks Tom

<http://dailycaller.com/2017/09/12/epa-accused-of-burying-scientific-evidence-from-human-testing-that-contradicted-obamas-agenda/>

Sent from my iPhone



Message

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**From:** Sinks, Tom [Sinks.Tom@epa.gov]  
**Sent:** 5/23/2018 3:10:30 PM  
**To:** Hubbard, Carolyn [Hubbard.Carolyn@epa.gov]  
**CC:** Orme-Zavaleta, Jennifer [Orme-Zavaleta.Jennifer@epa.gov]; Yamada, Richard (Yujiro) [yamada.richard@epa.gov]; Feeley, Drew (Robert) [Feeley.Drew@epa.gov]; Sinks, Tom [Sinks.Tom@epa.gov]  
**Subject:** EPA leaking information about extension

Just letting you know that Steve Milloy has access to information about extending the public comment period and a public hearing. It would be great if EPA would get this information out so that all of our partners and the public knew about this at the same time. See embedded comments in his text below. <https://junkscience.com/2018/05/fake-science-historian-naomi-oreskes-attacks-epa-science-transparency-proposal/>

Sent from my iPhone

Message

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**From:** Hubbard, Carolyn [Hubbard.Carolyn@epa.gov]  
**Sent:** 9/14/2017 7:10:25 PM  
**To:** Yamada, Richard (Yujiro) [yamada.richard@epa.gov]  
**CC:** Maguire, Megan [Maguire.Megan@epa.gov]; Kuhn, Kevin [Kuhn.Kevin@epa.gov]; Blackburn, Elizabeth [Blackburn.Elizabeth@epa.gov]  
**Subject:** Re: RESPONSE ATTACHED RE: Human testing article

## Ex. 5 Deliberative Process (DP)

Carolyn Hubbard  
Communications Director  
EPA Office of Research and Development  
202-564-2189

Ex. 6 Personal Privacy (PP)

On Sep 14, 2017, at 3:00 PM, Yamada, Richard (Yujiro) <yamada.richard@epa.gov> wrote:

## Ex. 5 Deliberative Process (DP)

Sent from my iPhone

On Sep 14, 2017, at 2:10 PM, Hubbard, Carolyn <Hubbard.Carolyn@epa.gov> wrote:

## Ex. 5 Deliberative Process (DP)

Carolyn Hubbard  
Communications Director  
EPA Office of Research and Development  
202-564-2189

Ex. 6 Personal Privacy (PP)

**From:** Yamada, Richard (Yujiro)  
**Sent:** Thursday, September 14, 2017 1:53 PM  
**To:** Hubbard, Carolyn <Hubbard.Carolyn@epa.gov>  
**Cc:** Maguire, Megan <Maguire.Megan@epa.gov>; Kuhn, Kevin <Kuhn.Kevin@epa.gov>; Blackburn, Elizabeth <Blackburn.Elizabeth@epa.gov>  
**Subject:** Re: RESPONSE ATTACHED RE: Human testing article

Hi Carolyn,

## Ex. 5 Deliberative Process (DP)

Sent from my iPhone

On Sep 14, 2017, at 11:59 AM, Hubbard, Carolyn <Hubbard.Carolyn@epa.gov> wrote:

## Ex. 5 Deliberative Process (DP)

Thanks.

Carolyn Hubbard  
Communications Director  
EPA Office of Research and Development  
202-564-2189

Ex. 6 Personal Privacy (PP)

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**From:** Nelson, Daniel K.  
**Sent:** Wednesday, September 13, 2017 4:25 PM  
**To:** Hubbard, Carolyn <[Hubbard.Carolyn@epa.gov](mailto:Hubbard.Carolyn@epa.gov)>  
**Cc:** Cascio, Wayne <[Cascio.Wayne@epa.gov](mailto:Cascio.Wayne@epa.gov)>; Diaz-Sanchez, David <[Diaz-Sanchez.David@epa.gov](mailto:Diaz-Sanchez.David@epa.gov)>; Yamada, Richard (Yujiro) <[yamada.richard@epa.gov](mailto:yamada.richard@epa.gov)>; Benson, William <[Benson.William@epa.gov](mailto:Benson.William@epa.gov)>; Rodan, Bruce <[rodan.bruce@epa.gov](mailto:rodan.bruce@epa.gov)>; Kavlock, Robert <[Kavlock.Robert@epa.gov](mailto:Kavlock.Robert@epa.gov)>; Sinks, Tom <[Sinks.Tom@epa.gov](mailto:Sinks.Tom@epa.gov)>  
**Subject:** RESPONSE ATTACHED RE: Human testing article

Carolyn,

As Wayne Cascio communicated, we have drafted a response to the Daily Caller inquiry, stemming from Steve Milloy's latest post about one of our NHEERL studies. Please see attached.

## Ex. 5 Deliberative Process (DP)

Dan

~~~~~  
Daniel Nelson, Director  
Human Research Protocol Office (HRPO)  
National Health and Environmental Effects Research Laboratory  
(NHEERL)  
U.S. Environmental Protection Agency (EPA)  
[Nelson.Daniel@epa.gov](mailto:Nelson.Daniel@epa.gov)

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**From:** Sinks, Tom  
**Sent:** Wednesday, September 13, 2017 1:38 PM  
**To:** Yamada, Richard (Yujiro) <[yamada.richard@epa.gov](mailto:yamada.richard@epa.gov)>

**Cc:** Benson, William <[Benson.William@epa.gov](mailto:Benson.William@epa.gov)>; Cascio, Wayne  
<[Cascio.Wayne@epa.gov](mailto:Cascio.Wayne@epa.gov)>; Hubbard, Carolyn  
<[Hubbard.Carolyn@epa.gov](mailto:Hubbard.Carolyn@epa.gov)>; Rodan, Bruce <[rodan.bruce@epa.gov](mailto:rodan.bruce@epa.gov)>;  
Kavlock, Robert <[Kavlock.Robert@epa.gov](mailto:Kavlock.Robert@epa.gov)>; Sinks, Tom  
<[Sinks.Tom@epa.gov](mailto:Sinks.Tom@epa.gov)>  
**Subject:** RE: Human testing article

Thanks for sharing Richard.

Ex. 5 Deliberative Process (DP)

## Ex. 5 Deliberative Process (DP)

TROPICOZ is a controlled exposure study conducted by EPA. Information about the study is located on Clinical [Trials.gov](https://clinicaltrials.gov) at <https://clinicaltrials.gov/ct2/show/NCT01981135>

I am ccing Wayne Cascio because his group would have done the work. Wayne can you provide Richard with the facts re this article? Also Carolyn Hubbard in case OC already has some information to share with you.

Also ccing Bill Benson, Bruce and Bob a an FYI. .

I will also check some OSA records just in case.

---

**From:** Yamada, Richard (Yujiro)  
**Sent:** Wednesday, September 13, 2017 1:10 PM  
**To:** Sinks, Tom <[Sinks.Tom@epa.gov](mailto:Sinks.Tom@epa.gov)>  
**Subject:** Human testing article

Thanks Tom

<http://dailycaller.com/2017/09/12/epa-accused-of-burying-scientific-evidence-from-human-testing-that-contradicted-obamas-agenda/>

Sent from my iPhone

<Daily Caller response 9-13-2017.docx>